COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit No.: VA0022721
Effective Date: August 1, 2011
Expiration Date: July 31, 2016

AUTHORIZATION TO DISCHARGE UNDER THE

VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM

AND

THE VIRGINIA STATE WATER CONTROL LAW

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the information submitted with the permit application, and with this permit cover page, and Parts I and Part II of this permit, as set forth herein.

Owner:	Halifax County Public Schools
Facility Name:	Meadville Elementary School
County:	Halifax
Facility Location:	1011 Meadville Loop, Halifax County

The owner is authorized to discharge to the following receiving stream:

Stream:	UT to Sandy Creek
River Basin:	Roanoke River
River Subbasin:	Roanoke River
Section:	2b
Class:	III
Special Standards:	PWS

Robert J. Weld, Regional Director
Blue Ridge Regional Office

Date

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from Outfall 001. This discharge shall be limited and monitored as specified below.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
	MONTHLY AVERAGE		WEEKLY AVERAGE		MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
	mg/L*	kg/day*	mg/L*	kg/d*	mg/L*	mg/L*		
Flow (MGD)[a]	NL		NA		NA	NL	5 Days/Week	Estimate
BOD_5[b,e]	30	0.58	45	0.87	NA	NA	1/Month	Grab
Total Suspended Solids[b,e]	60	1.2	90	1.7	NA	NA	1/Month	Grab
Ammonia-Nitrogen[e]	12	NA	12	NA	NA	NA	1/Month	Grab
Total Residual Chlorine (ug/L)[d,e]	9.8	NA	12	NA	NA	NA	5 Days/Week	Grab
Dissolved Oxygen	NA		NA		6.0	NA	5 Days/Week	Grab
pH (standard units)	NA		NA		6.0	9.0	5 Days/Week	Grab
E. coli (N/100mL)[d]	126 N/100mL **		NA		NA	126 N/100 mL	1/Year [f]	Grab

* unless otherwise noted NL = No limitation, monitoring required. NA = Not applicable
** Geometric Mean

a. The design flow of this treatment facility is 0.0051 MGD.
b. At least 85 percent removal for BOD5 and 65 percent removal for TSS must be attained for this effluent.
c. There shall be no discharge of floating solids or visible foam in other than trace amounts.
d. See Part I.B for additional chlorine monitoring requirements.
e. See Part I.C.9 for quantification levels and reporting requirements.
f. 4 weekly samples collected in one month, between 10 a.m. and 4 p.m.
g. See Part I.B.14 for reporting requirements.

A. GROUND WATER LIMITATIONS/MONITORING

2. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee shall monitor the ground water from the following site monitoring locations: MW-1 (up-gradient), and MW-2 and MW-3 (down-gradient). Ground water shall be limited and monitored by the permittee as specified below:

PARAMETER	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			FREQUENCY	SAMPLE TYPE
Static Water Level	NA	0.01 FT	1/3 Months	Measured
Specific Conductance	NL	umhos/cm	1/3 Months	Grab
pH (standard units)	6.0	SU	1/3 Months	Grab
Ammonia - Nitrogen	NL	mg/L	1/3 Months	Grab
Nitrate - Nitrogen	NL	mg/L	1/3 Months	Grab
Total Organic Carbon	NL	mg/L	1/3 Months	Grab
Chloride	NL	mg/L	1/3 Months	Grab
Temperature	NL	° C	1/3 Months	Grab

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY

1/3 Months = Monitoring and reporting in accordance with the following schedule: 1st quarter (January 1 – March 31, **due April 10**); 2nd quarter (April 1 – June 30, **due July 10**); 3rd quarter (July 1 – September 30, **due October 10**); 4th quarter (October 1 – December 31, **due January 10**)

Grab samples - An individual sample should be taken after three (3) well volumes of ground water are removed (allowing the well to recharge between each well volume removed) or until well purging parameters (i.e. pH, temperature, and specific conductance) stabilize to ± 10%. The bailer or hose used should not contaminate samples.

B. ADDITIONAL TOTAL RESIDUAL CHLORINE (TRC) LIMITATIONS AND MONITORING REQUIREMENTS

1. If chlorine is used as the disinfection method, TRC shall be limited and monitored by the permittee as specified below:

   a. The permittee shall monitor the TRC at the outlet of each operating chlorine contact tank, prior to dechlorination, five days per week by grab sample.
   b. No more than 2 of all samples taken at the outlet of each operating chlorine contact tank, prior to dechlorination, shall be less than 1.5 mg/L for any one calendar month.
   c. No TRC sample collected at the outlet of each operating chlorine contact tank, prior to dechlorination, shall be less than 0.6 mg/L.

2. The permittee shall report *E. coli* monitoring results on the DMR as specified below:

   a. If four or more weekly samples are collected during a discharge month, report the geometric mean of the results as the average concentration. Report maximum concentration as "NR" (not required).
   b. If there are insufficient data to report a geometric mean (fewer than four weekly samples), report the largest single sample value as the maximum concentration. Report the number of samples exceeding the maximum concentration limit in the "No. Ex." Column. Report average concentration as "NR" (not required) and provide an explanation why four weekly samples were not collected.

3. If an alternative to chlorine disinfection is used, *E. coli* shall be limited and monitored by the permittee as specified in Part I.A.1 and B.2 with the exception that the monitoring frequency shall be once per week in every month there is a discharge.

C. OTHER REQUIREMENTS OR SPECIAL CONDITIONS

1. 95% Capacity Reopener

   A written notice and a plan of action for ensuring continued compliance with the terms of this permit shall be submitted to the DEQ Blue Ridge Regional Office when the monthly average flow influent to the sewage treatment plant reaches 95 percent of the design capacity authorized in this permit for each month of any three consecutive month period. The written notice shall be submitted within 30 days and the plan of action shall be received at the DEQ Blue Ridge Regional Office no later than 90 days from the third consecutive month for which the flow reached 95 percent of the design capacity. The plan shall include the necessary steps and a prompt schedule of implementation for controlling any current or reasonably anticipated problem resulting from high influent flows. Failure to submit an adequate plan in a timely manner shall be deemed a violation of this permit.

2. CTC, CTO Requirement

   The permittee shall, in accordance with the DEQ Sewage Collection and Treatment Regulation (9VAC25-790), obtain a Certificate to Construct (CTC), and a Certificate to Operate (CTO) from the DEQ Office of Wastewater Engineering (for Water Quality Improvement Funded (WQIF) projects) or submitted by the design engineer and owner to the DEQ regional water permit manager (for non WQIF projects) prior to constructing wastewater treatment works and operating the treatment works, respectively. Non-compliance with the CTC or CTO shall be deemed a violation of the permit.

3. Operations and Maintenance (O & M) Manual

The permittee shall review the existing Operations and Maintenance (O & M) Manual and notify the DEQ Regional Office in writing by **October 30, 2011** whether it is still accurate and complete. If the O & M Manual is no longer accurate and complete, a revised O & M Manual shall be submitted for approval to the DEQ Regional Office by **October 30, 2011**. The permittee will maintain an accurate, approved operation and maintenance manual for the treatment works. This manual shall detail the practices and procedures which will be followed to ensure compliance with the requirements of the permit. The permittee shall operate the treatment works in accordance with the approved O&M Manual. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

a. Techniques to be employed in the collection, preservation, and analysis of effluent and sludge samples;
b. Procedures for measuring and recording the duration and volume of treated wastewater discharged;
c. Discussion of Best Management Practices, if applicable;
d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants that will prevent these materials from reaching state waters.
e. Treatment works design, treatment works operation, routine preventative maintenance of units within the treatment system, critical spare parts inventory and record keeping; and,
f. A plan for the management and/or disposal of waste solids and residues.

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for DEQ Regional staff approval within 90 days of the effective date of the changes. Upon approval of the submitted manual changes, the revised manual becomes an enforceable part of the permit. Noncompliance with the O & M Manual shall be deemed a violation of the permit.

4. Licensed Wastewater Operator Requirement

No licensed wastewater works operator is required at this permitted facility.

5. Reliability Class

The permitted treatment works shall meet Reliability Class II.

6. Facility Closure Plan

If the permittee plans an expansion or upgrade to replace the existing treatment works, or if the facility is permanently closed, the permittee shall submit to the DEQ Regional Office a closure plan for the existing treatment works. The plan shall address the following information as a minimum: Verification of elimination of sources and/or alternate treatment scheme; treatment, removal and final disposition of residual wastewater and solids; removal/demolition/disposal of structures, equipment, piping and appurtenances; site grading, and erosion and sediment control; restoration of site vegetation; access control; fill materials; and proposed land use (post-closure) of the site. The plan should contain proposed dates for beginning and completion of the work. The plan must be approved by the DEQ prior to implementation.

7. Sludge Reopener

The Board may promptly modify or revoke and reissue this permit if any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the Clean Water Act is more stringent than any requirements for sludge use or disposal in this permit, or controls a pollutant or practice not limited in this permit.

8. Total Maximum Daily Load (TMDL) Reopener

This permit shall be modified or alternatively revoked and reissued if any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements.

9. Compliance Reporting

a. The quantification levels (QL) shall be less than or equal to the following concentrations:

Effluent Parameter	Quantification Level
Chlorine	0.10 mg/L
Ammonia	0.20 mg/L
TSS	1.0 mg/L
BOD5	5.0 mg/L

The QL is defined as the lowest concentration used to calibrate a measurement system in accordance with the procedures published for the method. It is the responsibility of the permittee to ensure that proper quality assurance/quality control (QA/QC) protocols are followed during the sampling and analytical procedures. QA/QC information shall be documented to confirm that appropriate analytical procedures have been used and the required QLs have been attained. The permittee shall use any method in accordance with Part II A of this permit.

b. Reporting

Monthly Average -- Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in subsection a. of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as it is reported. An arithmetic average shall be calculated using all reported data for the month, including the defined zeros. This arithmetic average shall be reported on the Discharge Monitoring Report (DMR) as calculated. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above), then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported monthly average concentration is <QL, then report "<QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the monthly average of the calculated daily quantities.

Weekly Average -- Compliance with the weekly average limitations and/or reporting requirements for the parameters listed in subsection a. of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each complete calendar week and entirely contained within the reporting month. The maximum value of the weekly averages thus determined shall be reported on the DMR. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above), then the weekly average shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported weekly average concentration is <QL, then report "<QL" for the quantity. . Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the maximum weekly average of the calculated daily quantities.

Daily Maximum -- Compliance with the daily maximum limitations and/or reporting requirements for the parameters listed in subsection a. of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each day during the reporting month. The maximum value of these daily averages thus determined shall be reported on the DMR as the Daily Maximum. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above), then the maximum value of the daily averages shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported daily maximum concentration is <QL, then report "<QL" for the quantity. Otherwise use the reported daily average concentrations (including the defined zeros) and corresponding daily flows to determine daily average quantities and report the maximum of the daily average quantities during the reporting month.

Single Datum -- Any single datum required shall be reported as "<QL" if it is less than the QL used for the analysis (QL must be less than or equal to the QL listed in a. above). Otherwise the numerical value shall be reported.

c. Significant Digits -- The permittee shall report at least the same number of significant digits as the permit limit for a given parameter. Regardless of the rounding convention used by the permittee (i.e., 5 always rounding up or to the nearest even number), the permittee shall use the convention consistently, and shall ensure that consulting laboratories employed by the permittee use the same convention.

10. Sludge Use and Disposal

The permittee shall conduct all sewage sludge use or disposal activities in accordance with the Sludge Management Plan (SMP) approved with the issuance of this permit. Any proposed changes in the sewage sludge use or disposal practices or procedures followed by the permittee shall be documented and submitted for DEQ approval 90 days prior to the effective date of the changes. Upon approval, the revised SMP becomes an enforceable part of the permit. The permit may be modified or alternatively revoked and reissued to incorporate limitations or conditions necessitated by substantive changes in sewage sludge use or disposal practices.

11. Ground Water Monitoring

a. The permittee shall conduct a statistical evaluation of the ground water monitoring data to determine if the system integrity is being maintained and to indicate if activities at the site are resulting in violations of the Board's Ground Water Standards. A statistical evaluation report shall be submitted to the Blue Ridge Regional Office no later than **November 29, 2011**. This report shall include statistical methods, statistical results, and a discussion of the results.

b. If the statistical evaluation required in Part I.11.a indicates that the system integrity is not being maintained, or indicates that activities at the site are resulting in violations of the Board's Ground Water Standards, the permittee shall submit a corrective action plan within 60 days of being notified by the regional office. The plan shall set forth the steps to be taken by the permittee to ensure that the system integrity is maintained and the source of the violations of the Board's Ground Water Standards is eliminated. Once approved, the plan shall be incorporated into the permit by reference and become an enforceable part of this permit.

c. Unless otherwise exempted under an approved corrective action plan, the permittee shall sample and report in accordance with the approved ground water monitoring plan approved on January 13, 1993, with the following exceptions:

Total phosphorus and fecal coliform are deleted from the monitoring requirements.

The approved plan is an enforceable part of the permit. The purpose of this plan is to determine if the system integrity is being maintained and to indicate if activities at the site are resulting in violations of the Board's Ground Water Standards. Any changes to the plan must be submitted for approval to the DEQ Regional Office.

d. Ground water monitoring and reporting during each year shall be in accordance with the following schedule:
1st quarter monitoring period: January 1 - March 31; **due April 10**;
2nd quarter monitoring period: April 1 - June 30; **due July 10**;
3rd quarter monitoring period: July 1 - September 30; **due October 10**;
4th quarter monitoring period: October 1 - December 31; **due January 10**.

12. Ammonia and Chlorine Limitation

The effluent limitations for ammonia-nitrogen and chlorine are based on the discharge being intermittent in nature. If the facility discharges more than three (3) consecutive days, this permit may be modified or, alternatively, revoked and reissued in order to address chronic water quality standards.

13. Permit Application Requirement

In accordance with Part II. M. of this permit, a new and complete permit application shall be submitted for the reissuance of this permit no later than **February 2, 2016**.

CONDITIONS APPLICABLE TO ALL VPDES PERMITS

A. Monitoring

1. Samples and measurements taken as required by this permit shall be representative of the monitored activity.

2. Monitoring shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.

3. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.

B. Records

1. Records of monitoring information shall include:

   a. The date, exact place, and time of sampling or measurements;

   b. The individual(s) who performed the sampling or measurements;

   c. The date(s) and time(s) analyses were performed;

   d. The individual(s) who performed the analyses;

   e. The analytical techniques or methods used; and

   f. The results of such analyses.

2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Board.

C. Reporting Monitoring Results

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place, unless another reporting schedule is specified elsewhere in this permit. Monitoring results shall be submitted to:

   Virginia Department of Environmental Quality
   Blue Ridge Regional Office
   7705 Timberlake Road
   Lynchburg, Virginia 24502

2. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved or specified by the Department.

3. If the permittee monitors any pollutant specifically addressed by this permit more frequently than required by this permit using test procedures approved under Title 40 of the Code of Federal Regulations Part 136 or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Department.

4. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

E. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized Discharges

Except in compliance with this permit, or another permit issued by the Board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or

2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, or to animal or aquatic life, or to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses.

G. Reports of Unauthorized Discharges

Any permittee who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon state waters in violation of Part II F; or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of Part II F, shall notify the Department of the discharge immediately upon discovery of the discharge, but in no case later than 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the Department, within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and

8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit.

Discharges reportable to the Department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of Unusual or Extraordinary Discharges

If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the Department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the Department within five days of discovery of the discharge in accordance with Part II I 2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service some or all of the treatment works; and
4. Flooding or other acts of nature.

I. Reports of Noncompliance

The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health.

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:

   a. Any unanticipated bypass; and
   b. Any upset which causes a discharge to surface waters.

2. A written report shall be submitted within 5 days and shall contain:

   a. A description of the noncompliance and its cause;
   b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
   c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

   The Board may waive the written report on a case-by-case basis for reports of noncompliance under Part II I if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Parts II I 1 or 2, in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II I 2.

NOTE: The immediate (within 24 hours) reports required in Parts II G, H and I may be made to the Department's Regional Office at (434) 582-5120 (voice) or (434) 582-5125 (fax). For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24 hour telephone service at 1-800-468-8892.

J. Notice of Planned Changes

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

   a. The permittee plans alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

      (1) After promulgation of standards of performance under Section 306 of Clean Water Act which are applicable to such source; or

      (2) After proposal of standards of performance in accordance with Section 306 of Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal;

   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or

   c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

K. Signatory Requirements

1. Applications. All permit applications shall be signed as follows:

   a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

   b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

   c. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports, etc. All reports required by permits, and other information requested by the Board shall be signed by a person described in Part II K 1, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Part II K 1;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

c. The written authorization is submitted to the Department.

3. Changes to authorization. If an authorization under Part II K 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part II K 2 shall be submitted to the Department prior to or together with any reports, or information to be signed by an authorized representative.

4. Certification. Any person signing a document under Parts II K 1 or 2 shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. All permittees with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Board. The Board shall not grant permission for applications to be submitted later than the expiration date of the existing permit.

N. Effect of a Permit

This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State Law

Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by Section 510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II U), and "upset" (Part II V) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Sections 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of solids or sludges

Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

S. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

U. Bypass

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II U 2 and U 3.

2. Notice

   a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least ten days before the date of the bypass.

   b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II I.

3. Prohibition of bypass.

a. Bypass is prohibited, and the Board may take enforcement action against a permittee for bypass, unless:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required under Part II U 2.

b. The Board may approve an anticipated bypass, after considering its adverse effects, if the Board determines that it will meet the three conditions listed above in Part II U 3 a.

V. Upset

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of Part II V 2 are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.

2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the permittee can identify the cause(s) of the upset;

b. The permitted facility was at the time being properly operated;

c. The permittee submitted notice of the upset as required in Part II I; and

d. The permittee complied with any remedial measures required under Part II S.

3. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law, any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. Permit Actions

Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Y. Transfer of permits

1. Permits are not transferable to any person except after notice to the Department. Except as provided in Part II Y 2, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.

2. As an alternative to transfers under Part II Y 1, this permit may be automatically transferred to a new permittee if:

   a. The current permittee notifies the Department at least 30 days in advance of the proposed transfer of the title to the facility or property;

   b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

   c. The Board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II Y 2 b.

Z. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

VPDES PERMIT FACT SHEET

This document gives pertinent information concerning the reissuance of the VPDES permit listed below. This permit is being processed as a Minor, Municipal permit. The effluent limitations contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260-00 et seq. The discharge results from the treatment of sanitary waste from Meadville Elementary School by a lagoon system with aeration, chlorination, and dechlorination. This permit action consists of updating boilerplate, adding bacteria monitoring, and updating ground water monitoring requirements. SIC Code: 4952 & 8211

1. Facility Name and Address:
Meadville Elementary School
P.O. Box 1849
Halifax, VA 24558

Physical Location:
Meadville Elementary School
1011 Meadville Loop
Halifax County, Virginia

2. Permit No. **VA0022721**

Existing Permit Expiration Date: 7/31/2011

3. Owner Contact:
Name: Paul D. Stapleton
Title: Superintendent of Schools
Telephone No: (434) 476-2171
Address: Halifax County Public Schools
P.O. Box 1849
Halifax, VA 24558

Facility Contact
Name: Larry D. Roller
Title: Dir. Of Operations & Maintenance
Halifax County Public Schools
Phone: (434) 572-4346

4. Application Complete Date:
Permit Drafted By: Kevin A. Harlow Date: 6/10/2011 Blue Ridge Regional Office
Reviewed By: _____ Date:_____
Public Comment Period Dates: from_____to_____

5. Receiving Stream Name: UT to Sandy Creek River Mile: 0.6
Basin: Roanoke River Subbasin: Roanoke River Section: 2b Class: III Special Standards: PWS

7-Day, 10-Year Low Flow (7Q10): 0.0 MGD
7Q10 High Flow months: 0.0 MGD
30-Day, 5-Year Low Flow (30Q5): 0.0 MGD
30-Day, 10-Year Low Flow (30Q10): 0.0 MGD
Tidal? NO

1-Day, 10-Year Low Flow (1Q10):0.0 MGD
1Q10 High Flow months: 0.0 MGD
Harmonic Mean Flow (HM): 0.0 MGD

On 303(d) list? NO

Although the receiving stream has not been determined to be impaired, the Sandy Creek Watershed it is included in the downstream Banister River Bacteria TMDL. The Flow Frequency Memorandum is included in **Attachment C.**

6. Operator License Requirements: None

7. Reliability Class: II

8. Permit Characterization:
( ) Private ( ) Federal ( ) State (X) POTW ( ) PVOTW

( ) Possible Interstate Effect ( ) Interim Limits in Other Document

9. Provide a brief description of the wastewater treatment system.

Discharge Description

OUTFALL NUMBER	DISCHARGE SOURCE	TREATMENT	FLOW
001	Sewage from an elementary school	Stabilization pond followed by chlorination, aeration and dechlorination	0.0051 MGD

A process flow diagram is included in **Attachment A**.

10. Sewage Sludge Use or Disposal: Sludge has not accumulated in the stabilization pond to the point of needing disposal. The grease trap is cleaned on an annual basis via a septage hauler who hauls to the South Boston Sewage Treatment Plant for disposal.

11. Discharge Location Description: A USGS topographic map which indicates the proposed discharge location, any significant dischargers, any water intakes, and other items of interest is included in **Attachment B**. The latitude and longitude of the proposed discharge is
36° 50′ 7.38″ 79° 2′ 34.1″
USGS Topo Map Name: Vernon Hill USGS Topo Map Number: 046D

12. Material Storage: There are no materials stored outside.

13. Ambient Water Quality Information: The facility discharges into an unnamed tributary to Sandy Creek. See **Attachment C** for a summary of the flow frequencies. The UT to Sandy Creek is in the Sandy Creek Watershed (VAC-L70R). There is no ambient water quality monitoring data for the intermittent receiving stream and the facility has not discharged in more than five years. Although the receiving stream has not been determined to be impaired, the Sandy Creek Watershed it is included in the downstream Banister River Bacteria TMDL.

14. Antidegradation Review & Comments: Tier 1 _X____ Tier 2 _____ Tier 3 _____
The State Water Control Board's Water Quality Standards includes an antidegradation policy (9 VAC 25-260-30). All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The antidegradation review begins with a Tier determination. The facility discharges to an unnamed tributary to Sandy Creek. This receiving stream is not listed on the 303(d) list and no in-stream data are available that indicate the water quality criteria either have been violated or are barely met. However, the receiving stream critical flows have been determined to be equivalent to 0.0 MGD and the permit contains water quality-based limits for total residual chlorine (full allocation). Therefore, the UT to Sandy Creek, at the point of this facility's discharge, is designated as Tier I and no further review is needed. Antidegradation has been addressed by

establishing permit limits based on waste load allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These waste load allocations will provide for the protection and maintenance of all existing uses.

15. Site Inspection: Date: 5/13/2009 Performed by: Stephanie Bowman
Attachment D contains an excerpt of the site visit report.

16. Effluent Screening & Limitation Development:

DEQ Guidance Memorandum 00-2011 was used in developing all water quality based limits pursuant to water quality standards (9 VAC 25-260-5 et seq). Refer to **Attachment F** for the wasteload allocation spreadsheets **Attachment G** for historical limits development, and STATS program output. **Attachment H** contains the ground water monitoring data. See **Table II** for a summary and basis for the effluent limitations and monitoring requirements associated with the permit parameters.

Reduced Monitoring:
All permit applications are to be considered for reduction in the frequency of effluent monitoring. Only facilities having exemplary operations that consistently meet permit requirements should be considered for reduced monitoring. To qualify for consideration, the facility should not have been issued any letter of noncompliance (LON), notice of violation (NOV), or unsatisfactory laboratory determinations, or be under any Consent Orders, Consent decrees, Executive Compliance Agreements, or related enforcement documents during the past three years. This facility is not eligible for monitoring frequencies to be reduced due to the following Warning Letters: W2007-01-L1001, W2007-02-1006, W2007-03-1006.

A. **Mixing Zone**

Since the facility discharges to an intermittent stream with a 7Q10 of 0.0 MGD, there is no stream flow for mixing.

B. **Effluent Limitations for Conventional Pollutants**

Flow -- The permittee submitted a VPDES Permit Application for a design flow of 0.0051 MGD. The Sampling Schedule Table in the VPDES Permit Manual (Rev. 1/27/2010) shows that flow is to be estimated and shows a recommended monitoring frequency of once per day for facilities of this size. However, since the treatment system typically does not receive flow from the school during the weekend, flow is to be estimated and recorded five days per week.

pH -- The pH limits of **6.0 S.U. minimum and 9.0 S.U. maximum** are required. These limits are based upon the water quality criteria in 9 VAC 25-260-50 for Class III receiving waters and are in accordance with federal technology-based guidelines, 40 CFR Part 133, for secondary treatment. The Sampling Schedule Table in the VPDES Permit Manual (Rev. 1/27/2010) shows a sample type of grab and shows a recommended monitoring frequency of once per day for facilities of this size. However, since the treatment system typically does not receive flow from the school during the weekend, grab samples for pH shall be collected five days per week.

Total Suspended Solids (TSS) -- The Total Suspended Solids limits of a **monthly average of 60 mg/L (1.2 kilograms per day) and maximum weekly average of 90 mg/L (1.7 kilograms per day)** are technology-based equivalent to secondary treatment standard limits and are unchanged from previous permit. This facility uses a stabilization pond as the primary process and cannot meet secondary limits for TSS [30

mg/l (monthly average) and 45 mg/l (weekly maximum)]. This complies with 40 CFR 133.105 and maintains water quality standards. The mass limits of 1.2 kd/d (monthly average) and 1.7 kd/d (weekly average) were calculated based on the design flow of 0.0051 MGD. Grab samples shall be collected once per month of discharge in accordance with the recommendations in the VPDES Permit Manual (Rev. 1/27/2010).

Biochemical Oxygen Demand (BOD_5) -- The BOD_5 limits of **a monthly average limitation of 30 mg/L (0.58 kilograms per day) and a maximum weekly average limitation of 45 mg/L (0.87 kilograms per day)** are technology-based secondary treatment standard limits. The previous loading limits of a monthly average limitation of 0.6 kilograms per day and a maximum weekly average limitation of 0.9 kilograms per day are revised to be expressed in the correct number of significant digits (two significant digits). The mass limits of 0.58 kd/d (monthly average) and 0.87 kd/d (weekly average) were calculated based on the design flow of 0.0051 MGD. Grab samples shall be collected once per month of discharge in accordance with the recommendations in the VPDES Permit Manual.

Dissolved Oxygen (DO) -- The dissolved oxygen limit of **6.0 mg/l** (minimum) is carried forward from the previous permit. The DO limit is protective of the water quality standard for Class III streams of 5.0 mg/L minimum DO while allowing the BOD5 limit of 30 mg/l. The Sampling Schedule Table in the VPDES Permit Manual (Rev. 1/27/2010) shows a sample type of grab and shows a recommended monitoring frequency of once per day for facilities of this size. However, since the treatment system typically does not receive flow from the school during the weekend, grab samples for DO shall be collected five days per week.

E. coli -- A new *E. coli* monthly average limit, calculated as a geometric mean, of **126 N/100ml** and a maximum of **126 N/100 mL** has been added to the permit. Monitoring will be performed once per year. The monitoring will consist of once per week grab samples during the month monitoring occurs in order to calculate the geometric mean. Previously DEQ has allowed the use chlorine disinfection monitoring requirements as a surrogate for *E. coli*. However, the EPA has questioned the adequacy of the use of surrogate parameters for demonstrating compliance with TMDL wasteload allocations. Consequently, VPDES Permit Manual (Rev. 1/27/2010) Section MN-3 B.2 requires *E. coli* limits in permits with TMDL *E. coli* allocations. The new *E. coli* limit is required to demonstrate compliance with the bacteria wasteload allocation that will be assigned to the facility when the Banister River Bacteria TMDL (excerpted in **Appendix E**) is modified. Compliance with the new *E. coli* limit of 126 cfu/100mL and Part I.C.1 – 95% Capacity Reopener ensures compliance with the bacteria TMDL wasteload allocation of 1.22E+8 cfu/day or 4.44E+10 cfu/year. The TMDL allocation is based on 4 weekly samples collected during a calendar month. If four or more weekly samples cannot be collected, each sample must comply with a maximum limit of 126 cfu/100mL.

C. **Effluent Limitations for Toxic Pollutants**

Ammonia as Nitrogen -- The WLA spreadsheet was recalculated using updated receiving estimated effluent data and water quality standards. Given that the discharge is intermittent, limit evaluation is performed to protect acute water quality standards. The acute WLA for ammonia of 23 mg/L was input into the agency STATS program together with one datum value of 9 mg/l to force the program to calculate a limit. The STATS program determined that an acute-based limit is not needed for ammonia as nitrogen. This calculated "no limit needed" is less stringent than the permit limit for ammonia due to a change in the water quality standards for ammonia and estimated effluent quality. However, the current ammonia limit of a **maximum weekly average and monthly average of 12 mg/L** can not be relaxed due to anti-backsliding and is continued in this permit. **Attachment F** contains the spreadsheet

used to calculate the stream standards and wasteload allocations and the results of the reasonable potential determination for ammonia (STATS program). **Attachment G** includes the 2006 WLA spreadsheet and reasonable potential analysis for ammonia that are the basis for the current permit limit. Grab samples shall be collected once per month of discharge in accordance with the recommendations in the VPDES Permit Manual. Should the facility discharge more than three consecutive days, the chronic water quality criterion will need to be addressed (see special condition no. C.12).

Total Residual Chlorine (TRC) -- The facility uses chlorination as the disinfection method. TRC limits are water quality based and are calculated in accordance with Guidance Memo 00-2011 procedures. As an intermittent discharge to an intermittent stream, the reasonable potential analysis uses only the acute WLA. The acute WLA was input into the agency STATS.exe statistical software package together with one datum value of 20 mg/l (in accordance with GM #00-2011) to force the program to calculate the permit limits for TRC. TRC toxic limits for the effluent are a **maximum weekly average of 12 µg/l** and **monthly average of 9.8 µg/l**. See **Attachment F** for the WLA spreadsheet and STATS program output. The previous maximum weekly average limitation of 12.4 mg/L is revised to be expressed in the correct number of significant digits (two significant digits). The Sampling Schedule Table in the VPDES Permit Manual (Rev. 1/27/2010) shows a sample type of grab and shows a recommended monitoring frequency of once per day for facilities of this size. However, since the treatment system typically does not receive flow from the school during the weekend, grab samples for effluent TRC shall be collected five days per week. Should the facility discharge more than three consecutive days, the chronic water quality criterion will need to be addressed (see special condition no. C.12).

17. Basis for Sludge Use & Disposal Requirements:
A Sludge Management Plan was submitted for this facility with the permit application. Sludge has not accumulated in the stabilization pond to the point of needing disposal. The grease trap is cleaned on an annual basis via a septage hauler who hauls to the South Boston Sewage Treatment Plant for disposal.

18. Antibacksliding Statement:
All limits are at least as stringent as in the previous permit.

19. Compliance Schedules:
There are no compliance schedules in the reissued permit.

20. Special Conditions:

a. Additional TRC and E. coli Limitations and Monitoring Requirements
Rationale: Required by Sewage Collection and Treatment Regulations, 9VAC25-790. Also, 40 CFR 122.41(e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment in order to comply with the permit. This ensures proper operation of chlorination equipment to maintain adequate disinfection. 9 VAC 25-260-170 establishes bacteria water quality standards. The standards set bacteria monitoring requirements. This special condition is needed to describe requirements for when there is insufficient data (four weekly samples) to calculate a monthly geometric mean.

b. 95% Capacity Reopener
Rationale: Required by VPDES Permit Regulation, 9VAC25-31-200 B 4 for all POTW and PVOTW permits

c. CTC, CTO Requirement

Rationale: Required by Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790.

d. O&M Manual Requirement
Rationale: Required by Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790; VPDES Permit Regulation, 9VAC25-31-190 E.

e. Licensed Operator Requirement
Rationale: The VPDES Permit Regulation, 9VAC25-31-200 C and the Code of Virginia § 54.1-2300 et seq, Rules and Regulations for Waterworks and Wastewater Works Operators (18VAC160-20-10 et seq.), require licensure of operators.

f. Reliability Class
Rationale: Required by Sewage Collection and Treatment Regulations, 9VAC25-790 for all municipal facilities.

g. Facility Closure Plan
Rationale: Required by Code of Virginia § 62.1.-44.18:3 and the Board's Financial Assurance Regulation, 9VAC25-650-10 et seq.

h. Sludge Reopener
Rationale: Required by VPDES Permit Regulation, 9VAC25-31-220 C for all permits issued to treatment works treating domestic sewage.

i. Section 303(d) List (TMDL) Reopener
Rationale: Section 303(d) of the Clean Water Act requires that total maximum daily loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The re-opener recognizes that, according to section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act.

j. Compliance Reporting
Rationale: Authorized by VPDES Permit Regulation, 9VAC25-31-190 J 4 and 220 I. This condition is necessary when pollutants are monitored by the permittee and a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.

k. Sludge Use and Disposal
Rationale: VPDES Permit Regulation, 9VAC25-31-100 P; 220 B 2; and 420 through 720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on sludge use and disposal practices and to meet specified standards for sludge use and disposal.

l. Ground Water Monitoring Plan

Rationale: The State Water Control Law, Section 62.1-44.21, authorizes the Board to request information needed to determine the discharge's impact on State waters. Ground water monitoring for

parameters of concern will indicate whether the system integrity is being maintained and will determine if activities at the site are resulting in violations of the State Water Control Board's Ground Water Standards.

m. Ammonia and Chlorine Limitations
Rationale: The effluent limitations for ammonia-nitrogen and chlorine, which are contained within the permit, have been based on the discharge being intermittent in nature. The chronic criteria are based on a 96-hour exposure (4 days). Therefore, if the facility discharges more than 3 consecutive days, the permit will need to include limits which also consider the chronic water quality criteria for ammonia and chlorine.

n. Permit Application Requirement
Rationale: The VPDES Permit Regulation, 9 VAC 25-31-100 D. and 40 CFR 122.21 (d)(1) require a new application at least 180 days prior to expiration of the existing permit. In addition, the VPDES Permit Regulation, 9 VAC 25-31-100 E.1. and 40 CFR 122.21 (e)(1) note that a permit shall not be issued before receiving a complete application.

o. Part II, Conditions Applicable to All Permits
Rationale: VPDES Permit Regulation, 9VAC25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed.

21. Changes to Permit:
Special Conditions Removed:
Indirect Discharges – The VPDES Permit Manual does not recommend this condition for facilities of this type. There are currently no indirect dischargers to this system.

Material Storage – The VPDES Permit Manual does not recommend this condition for facilities of this type.

Special Conditions Added:
TMDL Reopener – The VPDES Permit Manual recommends this condition for all permits.

Special Conditions Updated:
Boilerplate special condition language has been updated to the language recommended in the current VPDES Permit Manual. Additionally, the special conditions have been renumbered.

Additional TRC and E. coli Limitations and Reporting Requirements - This condition is revised to include alternate E. coli limitations and *E. coli* reporting requirements when there is insufficient data (four weekly samples) to calculate a geometric mean.

Ground Water Monitoring – The frequency of monitoring has been increased to once per three months. A report containing a statistical evaluation of the groundwater data is required. A corrective action report is required if it is determined that the lagoon integrity is compromised or if ground water standards are being violated.

Effluent Limitation Changes:

Table I

Outfall		Monitoring	Effluent Limits	

No.	Parameter Changed	Requirement Changed		Changed		Reason for Change
		From	To	From	To	
001	E. coli – monthly avg (geometric mean)	NA	1/Yr	NA	126 N/100 mL	Monitoring is required to demonstrate compliance with the TMDL wasteload allocation.
001	E. coli – max weekly	NA	1/Yr	NA	126 N/100 mL	Monitoring is required to demonstrate compliance with the TMDL wasteload allocation.
001	BOD5 – monthly average load	5d/wk	5d/wk	0.6 kg/day	0.58 kg/day	The BOD5 loadings are revised to be expressed with 2 significant digits.
001	BOD5 – weekly average load	5d/wk	5d/wk	0.9 kg/day	0.87 kg/day	The BOD5 loadings are revised to be expressed with 2 significant digits.
001	TRC – weekly average conc.	5d/wk	5d/wk	12.4 mg/L	12 mg/L	The TRC concentration limit is revised to be expressed with 2 significant digits.

22. Variances/Alternate Limits or Conditions:
The permit does not contain any variances or alternate limits or conditions.

23. Regulation of Users: 9VAC25-31-280 B 9
There are no industrial users contributing to the treatment works.

24. Public Notice Information required by 9VAC25-31-280 B:

All pertinent information is on file and may be inspected, and copied by contacting Kevin A. Harlow at: Virginia DEQ Blue Ridge Regional Office, 3019 Peters Creek Road NW, Roanoke, Virginia 24019; Telephone No. (540) 562-6700, Kevin.Harlow@deq.virginia.gov.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public

hearing. Due notice of any public hearing will be given. The public may review the draft permit and application at the DEQ Blue Ridge Regional Office by appointment.

25. Additional Comments:
Previous Board Action: None.

Staff Comments: None

Public Notice Comments: No comments were received during the public notice.

Other Agency Comments: In their review of the application, VDH noted that the raw water intake for the Town of Halifax waterworks is located approximately 11 miles downstream from the discharge, although it is currently inactive. VDH recommended a minimum Reliability Class II for the facility.

26. 303(d) Listed Segments (TMDL): This facility discharges to an unnamed tributary to Sandy Creek. A downstream TMDL has been established for the discharge of *E. coli* on the current 303(d) list. EPA approved the Banister River Bacteria TMDL (excerpt in **Attachment E**) on November 4, 2007 for this segment. The approved TMDL does not contain an *E. coli* WLA for this discharge because WLAs were assigned only to those facilities whose permits included bacteria limitations, whereas this facility monitored TRC as a surrogate parameter for bacteria and proper disinfection. This permit reissuance establishes a monthly average *E. coli* limit of 126 N/100mL and a maximum weekly average of 126 N/100mL that is protective of water quality standards and is in agreement with the methodology used in the TMDL. Based upon the methodology used in the TMDL, these *E. coli* limits correspond to a WLA of 1.22E+8 cfu/day or 4.44E+10 cfu/year, which are less than 1% of the total TMDL allocation. *E. coli* WLAs will be assigned to this facility when the TMDL is modified. Upon TMDL modification, compliance with the *E. coli* permit limits will demonstrate compliance with the TMDL WLA. The permit contains a re-opener condition that allows these limits to be modified, in compliance with section 303(d)(4) of the Act if any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements.

Attachments

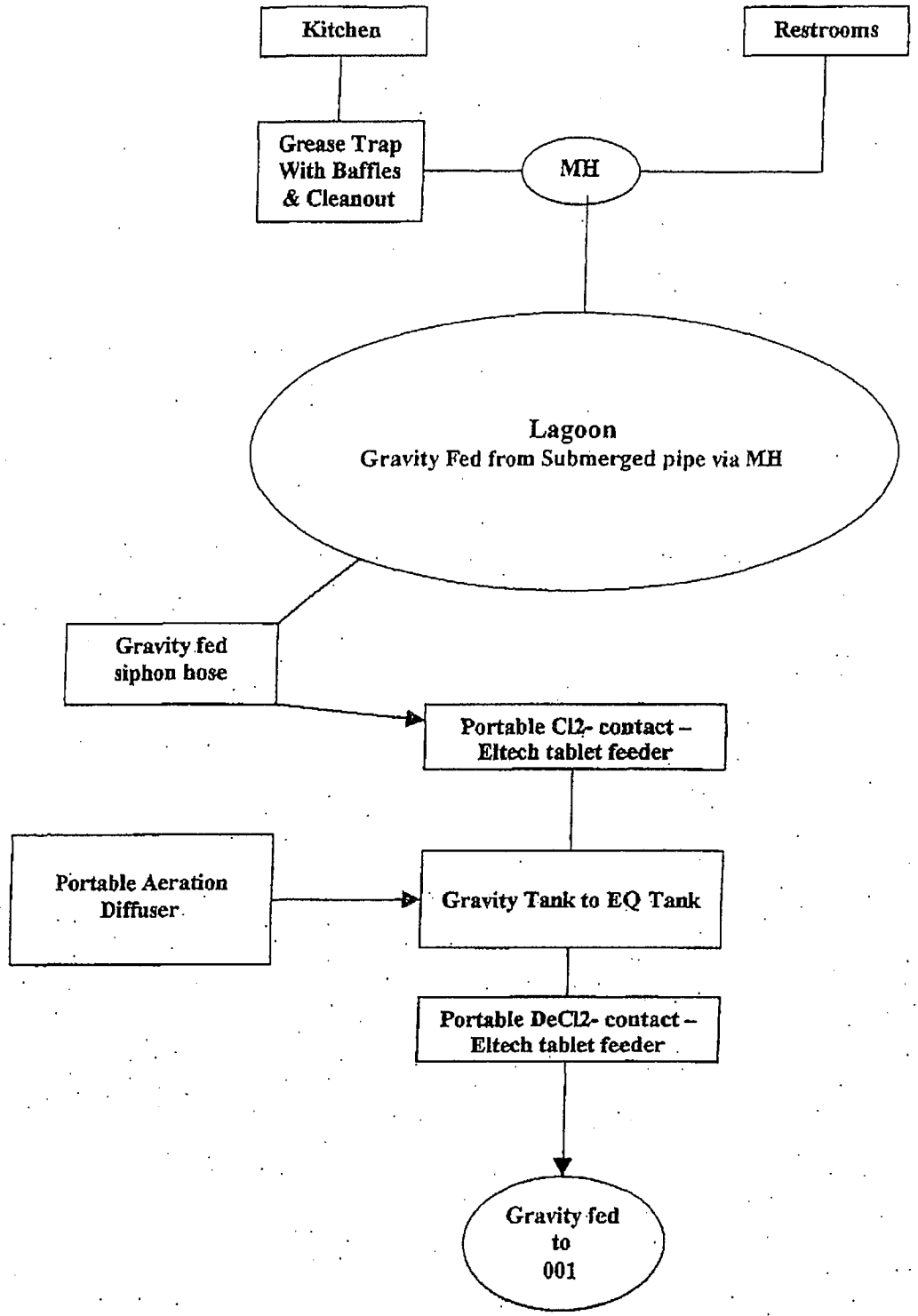
A. Wastewater Treatment Diagram
B. USGS Topographic Map
C. Flow Frequency Memorandum
D. Site Visit Report
E. Ambient Water Quality Information
   - Banister River TMDL Report (Excerpt)
F. Wasteload and Limit Calculations
   - Wasteload Allocation Spreadsheet
   - STATS Program Results
G. Historical Limit Development
H. Ground Water Monitoring

Attachment A

Wastewater Treatment Diagram

SECTION A ITEM 6

Meadville E.S. – VAOO22721



Attachment B

USGS Topographic Map

FORM 1 SECTION XI

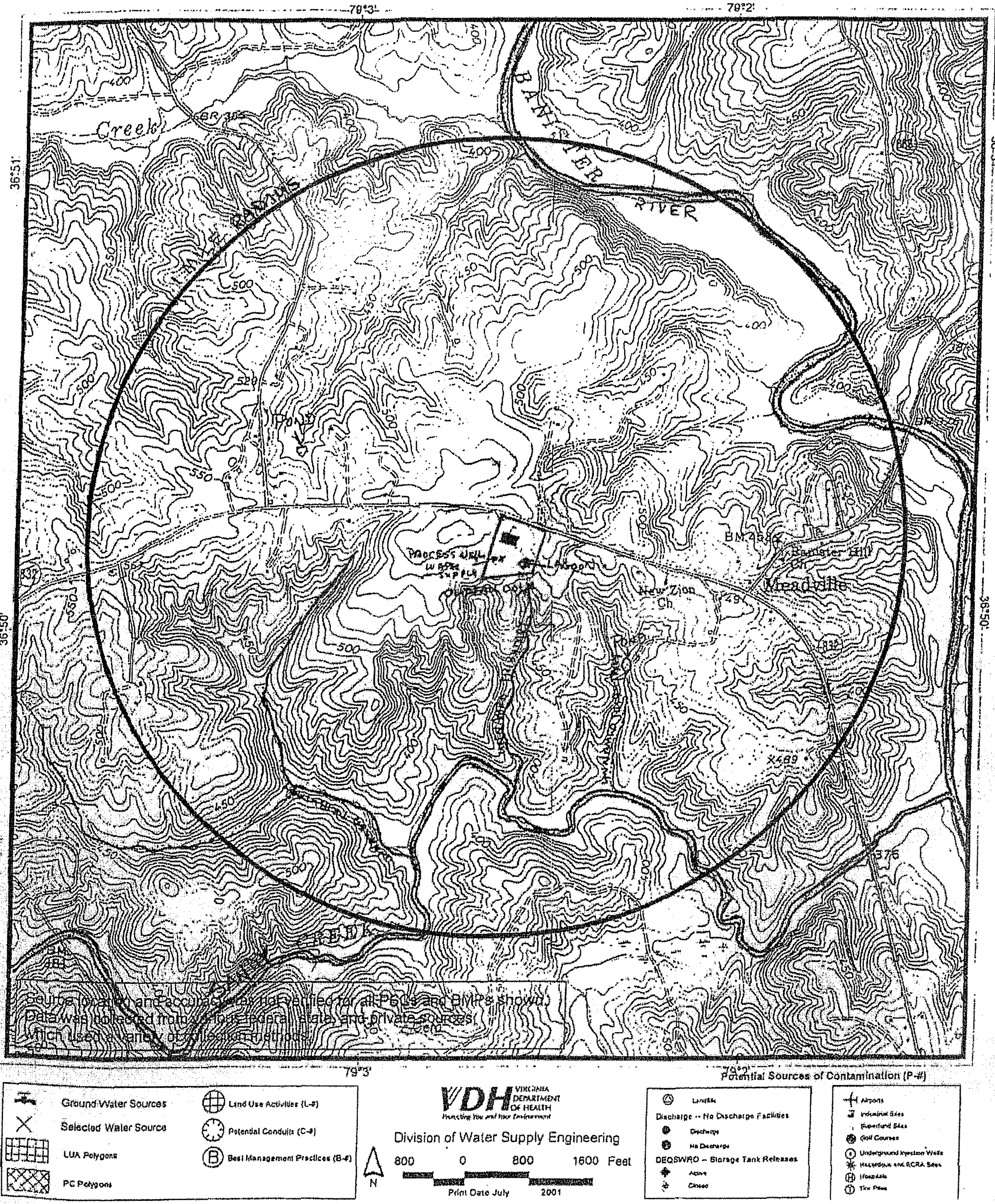
SWAP Zone 2 Map

DISTRICT 13

COUNTY/CITY: HALIFAX

VA0022721

MEADVILLE ELEMENTARY SCHOOL



Attachment C

Flow Frequency Memorandum

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
South Central Regional Office - Water Planning
7705 Timberlake Road Lynchburg, VA 24502 434/582-5120

SUBJECT: Flow Frequency Determination
Meadville Elementary School - #VA0022721

TO: Frank Bowman

FROM: Amanda Gray

DATE: August 4, 2010

COPIES: File

The Meadville Elementary School discharges to an unnamed tributary of Sandy Creek in Halifax County, Virginia. Flow frequencies are required at this site for use by the permit writer in developing the VPDES permit.

The flow frequencies for the receiving stream were determined by inspection of the USGS Quadrangle topographic map. The map depicts the stream as intermittent. The flow frequencies for intermittent streams are 0.0 cfs for the 1Q10, 7Q10, 30Q5, 30Q10, HF1Q10, HF7Q10, HF30Q10 and harmonic mean.

If you have any questions regarding this analysis please feel free to contact me.

Attachment D

Site Visit Report

Virginia Department of Environmental Quality

COMPLIANCE INSPECTION REPORT

FACILITY NAME: Halifax County Schools - Meadville Elementary		**INSPECTION DATE:** 05-13-09	
		INSPECTOR: Stephanie Bowman	
PERMIT No.: VA0022721		**REPORT DATE: 06-24-09**	
TYPE OF FACILITY: ☑ Municipal ☐ Major ☐ Industrial ☑ Minor ☐ Federal ☐ Small Minor ☐ HP ☐ LP		**TIME OF INSPECTION:**	Arrival 10:30 / Departure 11:30
		TOTAL TIME SPENT (including prep & travel)	8 hours
PHOTOGRAPHS: ☑ Yes ☐ No		**UNANNOUNCED INSPECTION?** ☑ Yes ☐ No	
REVIEWED BY / Date: **Fred T. DiLella**			
PRESENT DURING INSPECTION: Operator not on site			

WL/NOV # : Paraphrase Noncompliance issues	**Reported Cause of Noncompliance:**	**Corrective Action Taken:**
N/A	N/A	N/A

INSPECTION OVERVIEW AND CONDITION OF TREATMENT UNITS

VPDES NO. **VA0022721**

UNIT PROCESS: Ponds/Lagoons

1. Type: [ ] Aerated [X] Unaerated [ ] Polishing

2. No. of cells: 1 In operation: 1

3. Color: [X] Green [ ] Brown [ ] L. Brown [ ] Grey [ ] Other:

4. Odor: [ ] Septic* [ ] Earthy [X] None [ ] Other:

5. System operated in: [ ] Series [ ] Parallel [X] NA

6. If aerated, are lagoon contents mixed adequately? [ ] Yes [ ] No* [X] NA

7. If aerated, is aeration system operating properly? [ ] Yes [ ] No* [X] NA

8. Evidence of following problems:

a. vegetation in lagoon or dikes *Duck weed	[X] Yes*	[ ] No
b. rodents burrowing on dikes	[ ] Yes*	[X] No
c. erosion	[ ] Yes*	[X] No
d. sludge bars	[ ] Yes*	[X] No
e. excessive foam	[ ] Yes*	[X] No
f. floating material	[ ] Yes*	[X] No

9. Fencing intact: [X] Yes [ ] No*

10. Grass maintained properly: [X] Yes [ ] No

11. Level control valves working properly: [X] Yes [ ] No*

12. Effluent discharge elevation: [X] Top [ ] Middle [ ] Bottom

13. Freeboard: **6-7** ft.

14. Appearance of effluent: [ ] Good [ ] Fair [ ] Poor [X] **Not discharging**

15. General condition: [X] Good [ ] Fair [ ] Poor

16. Are monitoring wells present? [X] Yes [ ] No

Are wells adequately protected from runoff? [X] Yes [ ] No* [ ] NA

Are caps on and secured? [X] Yes [ ] No* [ ] NA

Comments: None

INSPECTION OVERVIEW AND CONDITION OF TREATMENT UNITS

UNIT PROCESS: Chlorination

1. No. of chlorinators: 1 — In operation: 0
2. No. of evaporators: 0 — In operation: 0
3. No. of chlorine contact tanks: 1 — In operation: 0
4. Proper flow distribution between units: [ ] Yes [ ] No* [X] NA
5. How is chlorine introduced into the wastewater?
   [ ] Perforated diffusers
   [ ] Injector with single entry point
   [ ] Other **Tablet Feeder**
6. Chlorine residual in basin effluent: N/A mg/L
7. Applied chlorine dosage: N/A bs/day **Not discharging**
8. Contact basins adequately baffled: [X] Yes [ ] No*
9. Adequate ventilation:
   a. cylinder storage area [ ] Yes [ ] No* [X] NA
   b. equipment room [ ] Yes [ ] No* [X] NA
10. Proper safety precautions used: [X] Yes [ ] No*
11. General condition: [X] Good [ ] Fair [ ] Poor

Comments: Facility was locked and secured at the time of the inspection.

UNIT PROCESS: Dechlorination

1. Chemical used: [ ] Sulfur Dioxide [ ] Bisulfite [X] Sodium Sulfite

2. No. of sulfonators: 1 In operation: 0

3. No. of evaporators: 0 In operation: 0

4. No. of chemical feeders: 1 In operation: 0

5. No. of contact tanks: 1 In operation: 0

6. Proper flow distribution between units: [ ] Yes [ ] No* [X] NA

7. How is chemical introduced into the wastewater?

   [ ] Perforated diffusers
   [ ] Injector with single entry point?
   [X] Other **Tablet Feeder**

8. Control system operational: [X] Yes [ ] No*

   a. residual analyzers: [ ] Yes [X] No*
   b. system adjusted: [ ] Automatic [X] Manual [ ] Other:

9. Applied dechlorination dose: **NA** lbs/day **Not discharging**

10. Chlorine residual in basin effluent: **NA** mg/L

11. Contact basins adequately baffled: [X] Yes [ ] No* [ ] NA

12. Adequate ventilation:

    a. cylinder storage area: [X] Yes [ ] No*
    b. equipment room: [ ] Yes [ ] No* NA

13. Proper safety precautions used: [X] Yes [ ] No*

14. General condition: [X] Good [ ] Fair [ ] Poor

Comments: Facility was locked and secure at the time of the inspection.

Permit #	VA0022721

EFFLUENT FIELD DATA:

Flow	N/A MGD	**Dissolved Oxygen**	N/A mg/L	**TRC (Contact Tank)**	N/a mg/L
pH	N/A S.U.	**Temperature**	N/A °C	**TRC (Final Effluent)**	N/A mg/L

Was a Sampling Inspection conducted? ☐ Yes (see Sampling Inspection Report) ☐ No

CONDITION OF OUTFALL AND EFFLUENT CHARACTERISTICS:

1. Type of outfall: ☑ Shore based ☐ Submerged Diffuser? ☐ Yes ☑ No
2. Are the outfall and supporting structures in good condition? ☑ Yes ☐ No
3. Final Effluent (evidence of following problems): ☐ Sludge bar ☐ Grease ☐ Turbid effluent ☐ Visible foam ☐ Unusual color ☐ Oil sheen
4. Is there a visible effluent plume in the receiving stream? ☐ Yes ☑ No
5. Receiving stream: ☑ No observed problems ☐ Indication of problems (explain below)

Comments: Not discharging at the time of the inspection

REQUIRED CORRECTIVE ACTIONS:

1. No recommendations at this time.

NOTES and COMMENTS:

1. The facility appeared to be well maintained and the monitoring wells were locked and secured.
2. This facility has 6-7 feet of freeboard before the lagoon will be capable of discharging.

Attachment E

Ambient Water Quality Information

- **Bannister River TMDL Report (Excerpt)**

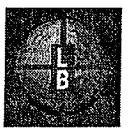
Bacteria TMDL Development for the Banister River, Bearskin Creek, Cherrystone Creek, Polecat Creek, Stinking River, Sandy Creek, and Whitehorn Creek Watersheds

Submitted by

Virginia Department of Environmental Quality

Prepared by

and



THE Louis Berger Group, INC.
2445 M Street, NW Washington, DC 20037

September 2007

3.5 Fecal Coliform Source Assessment

This section focuses on characterizing the sources that potentially contribute to the fecal coliform loading in the Banister River watershed. These sources include permitted facilities, sanitary sewer systems and septic systems, livestock, wildlife, pets, and land application of manure and biosolids. Chapter 4 includes a detailed presentation of how these sources are incorporated and represented in the model.

3.5.1 Permitted Facilities

Data obtained from the DEQ's South Central Regional Office Regional Office indicate that there are 8 individually permitted facilities currently active or under application within in the Banister River Watershed. The permit number, design flow, and status for each permit are presented in **Table 3-13** and shown in **Figure 3-12**.

The available flow data for the permitted facilities was retrieved and analyzed. Bacteria concentrations were not recorded for any of the permitted facilities within the watershed. Average flows for the permitted facilities were used in the HSPF model set-up and calibration. The waste treatment plants use chlorine for disinfection, and many measure total contact chlorine as an indication of fecal coliform levels. The available data indicate that adequate disinfection was achieved at the plants, and that these facilities were not a large source of fecal coliform loading. DMR data is summarized in Appendix A.

Table 3-13: Individual Permitted Facilities within the Banister River Watershed

Permit No	Facility Name	Receiving Stream	Status	Size	Category	Design Flow (GPD)	Permitted to Discharge Bacteria? (Y/N)
VA0006513	Gretna Town - Water Treatment Plant	Georges Creek	Active	Minor	Industrial	27,000	N
VA0020524	Chatham Town - Sewage Treatment Plant	Cherrystone Creek	Active	Minor	Municipal	685,000	Y
VA0022721	Halifax County Schools Meadville Elem	Sandy Creek/U.T.	Active	Minor	Municipal	5,100	N
VA0022730	Halifax County Schools Sydnor Jennings Elem	Bradley Creek/U.T.	Active	Minor	Municipal	5,100	N
VA0027707	Pittsylvania Co - Mount Airy Elementary School	Blacks Creek, UT	Active	Minor	Municipal	5,000	N
VA0027715	Pittsylvania Co - Union Hall Elem School	Wet Sleeve Creek, UT	Active	Minor	Municipal	6,000	N
VA0063843	Gretna Town - Sewage Treatment Plant	Georges Creek	Active	Minor	Municipal	350,000	Y
VA0001309	Cook Composites and	Banister	Active	Minor	Industrial	50,000	N

The pollutant concentrations were simulated over the entire duration of a representative modeling period, and pollutant loads were adjusted until the standard was met. The pollutant loads were calculated at the outlet of each impaired segment and include the loads from all upstream reaches and WLAs. The development of the allocation scenarios was an iterative process requiring numerous runs where each run was followed by an assessment of source reduction against the water quality target. The long-term average *E. Coli* loads and coefficient of variations were determined to implement the final allocation scenarios and to express the TMDL on a daily basis. Assuming a log-normal distribution of data and a probability of occurrence of 95%, the maximum daily loads were determined using the following equation (*USEPA OWOW 2007 Options for Expressing Daily Loads in TMDLs*):

$$MDL=LTA\times Exp[z\sigma-0.5\sigma^2]$$

Where;

MDL = maximum daily limit (cfu/day)

LTA = long-term average (cfu/day)

z = z statistic of the probability of occurrence

$\sigma^2 = \ln(CV^2+1)$

CV = coefficient of variation

The following sections present the waste load allocation (WLA) and load allocations (LA) for the eight impaired segments.

5.4 Waste Load Allocation

This section outlines the waste load allocations (WLA) for each impaired segment. It presents the existing and allocated loads for each permitted (VPDES) facility contributing to the impaired segment.

The existing load for general domestic permits is based on the allowable flow rate of 1,000 gal/day and a maximum *E. coli* concentration of 126 cfu/100 ml. The allocated load for domestic sewage facilities is based on the actual design flow of the system as presented in **Table 3-17**. This load is computed by applying a factor of five to the actual design flow of the system to account for future growth. While the growth-expanded

WLA is presented individually for each facility, it will be allocated to both new and existing facilities at the discretion of the permitting agency staff through permit issuances.

In general, the waste load allocation for point sources under individual VPDES permits was set assuming that they were operating at five times their design flow at their permitted maximum average concentration. The factor of five was introduced as a conservative measure to account for potential growth. This growth-expanded allocation for the individual permitted facilities was calculated and presented based on the current design limits of existing permits in the watershed, but it will be allocated to both new and existing permits as needed on a first-come, first-served basis. All current permit limits remain in effect and can only be altered through the VADEQ permitting process. Allocation of bacteria loadings shall be determined at the discretion of DEQ staff.

5.5 Load Allocation Development

The reduction of loadings from nonpoint sources, including livestock and wildlife direct deposition, is incorporated into the load allocation. A number of load allocation scenarios were developed in order to determine the final TMDL load allocation. Fecal coliform loading and instream fecal coliform concentrations were estimated for each potential scenario using the HSPF model for the hydrologic period of January 2000 to December 2005. **Table 5-1** shows the key load allocation scenarios that were implemented to arrive at the final TMDL allocations. It should be noted that these key scenarios were implemented for all segments. However, additional scenarios were also implemented when deemed necessary to attain the final TMDL. The following is a brief summary of the key scenarios:

- Scenario 0 is the existing load, no reduction of any of the sources.
- Scenario 1 represents elimination of human sources (septic systems and straight pipes).
- Scenario 2 represents the elimination of human sources (septic systems and straight pipes) as well as half the direct instream loading from livestock.
- Scenario 3 represents elimination of the human sources (septic systems and straight pipes) as well as the direct instream loading from livestock.
- Scenario 4 represents the direct instream loading from wildlife (all other sources are eliminated).
- Scenario 5 represents the elimination of the direct loading from nonpoint sources and a 50% reduction of the wildlife contribution.

Attachment F

Wasteload and Limit Calculations

- Wasteload Allocation Spreadsheet
- STATS Program Results

FRESHWATER
WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Meadville Elementary School Permit No.: VA0022721

Receiving Stream: Sandy Creek, UT

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information

Mean Hardness (as CaCO3) =	100 mg/L
90% Temperature (Annual) =	22 deg C
90% Temperature (Wet season) =	20 deg C
90% Maximum pH =	8 SU
10% Maximum pH =	7 SU
Tier Designation (1 or 2) =	1
Public Water Supply (PWS) Y/N? =	y
Trout Present Y/N? =	n
Early Life Stages Present Y/N? =	y

Stream Flows

1Q10 (Annual) =	0 MGD
7Q10 (Annual) =	0 MGD
30Q10 (Annual) =	0 MGD
1Q10 (Wet season) =	0 MGD
30Q10 (Wet season)	0 MGD
30Q5 =	0 MGD
Harmonic Mean =	0 MGD
Annual Average =	N/A MGD

Mixing Information

Annual - 1Q10 Mix =	100 %
- 7Q10 Mix =	100 %
- 30Q10 Mix =	100 %
Wet Season - 1Q10 Mix =	100 %
- 30Q10 Mix =	100 %

Effluent Information

Mean Hardness (as CaCO3) =	100 mg/L
90% Temp (Annual) =	25 deg C
90% Temp (Wet season) =	14 deg C
90% Maximum pH =	7.4 SU
10% Maximum pH =	6.8 SU
Discharge Flow =	0.0051 MGD

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Acenapthene	0	--	--	1.2E+03	2.7E+03	--	--	1.2E+03	2.7E+03	--	--	--	--	--	--	--	--	--	--	1.2E+03	2.7E+03
Acrolein	0	--	--	3.2E+02	7.8E+02	--	--	3.2E+02	7.8E+02	--	--	--	--	--	--	--	--	--	--	3.2E+02	7.8E+02
Acrylonitrile[C]	0	--	--	5.9E-01	6.6E+00	--	--	5.9E-01	6.6E+00	--	--	--	--	--	--	--	--	--	--	5.9E-01	6.6E+00
Aldrin [C]	0	3.0E+00	--	1.3E-03	1.4E-03	3.0E+00	--	1.3E-03	1.4E-03	--	--	--	--	--	--	--	--	3.0E+00	--	1.3E-03	1.4E-03
Ammonia-N (mg/l) (Yearly)	0	2.30E+01	2.41E+00	--	--	2.3E+01	2.4E+00	--	--	--	--	--	--	--	--	--	--	2.3E+01	2.4E+00	--	--
Ammonia-N (mg/l) (High Flow)	0	2.30E+01	4.73E+00	--	--	2.3E+01	4.7E+00	--	--	--	--	--	--	--	--	--	--	2.3E+01	4.7E+00	--	--
Anthracene	0	--	--	9.6E+03	1.1E+05	--	--	9.6E+03	1.1E+05	--	--	--	--	--	--	--	--	--	--	9.6E+03	1.1E+05
Antimony	0	--	--	1.4E+01	4.3E+03	--	--	1.4E+01	4.3E+03	--	--	--	--	--	--	--	--	--	--	1.4E+01	4.3E+03
Arsenic	0	3.4E+02	1.5E+02	1.0E+01	--	3.4E+02	1.5E+02	1.0E+01	--	--	--	--	--	--	--	--	--	3.4E+02	1.5E+02	1.0E+01	--
Barium	0	--	--	2.0E+03	--	--	--	2.0E+03	--	--	--	--	--	--	--	--	--	--	--	2.0E+03	--
Benzene [C]	0	--	--	1.2E+01	7.1E+02	--	--	1.2E+01	7.1E+02	--	--	--	--	--	--	--	--	--	--	1.2E+01	7.1E+02
Benzidine[C]	0	--	--	1.2E-03	5.4E-03	--	--	1.2E-03	5.4E-03	--	--	--	--	--	--	--	--	--	--	1.2E-03	5.4E-03
Benzo (a) anthracene [C]	0	--	--	4.4E-02	4.9E-01	--	--	4.4E-02	4.9E-01	--	--	--	--	--	--	--	--	--	--	4.4E-02	4.9E-01
Benzo (b) fluoranthene [C]	0	--	--	4.4E-02	4.9E-01	--	--	4.4E-02	4.9E-01	--	--	--	--	--	--	--	--	--	--	4.4E-02	4.9E-01
Benzo (k) fluoranthene [C]	0	--	--	4.4E-02	4.9E-01	--	--	4.4E-02	4.9E-01	--	--	--	--	--	--	--	--	--	--	4.4E-02	4.9E-01
Benzo (a) pyrene [C]	0	--	--	4.4E-02	4.9E-01	--	--	4.4E-02	4.9E-01	--	--	--	--	--	--	--	--	--	--	4.4E-02	4.9E-01
Bis2-Chloroethyl Ether	0	--	--	3.1E-01	1.4E+01	--	--	3.1E-01	1.4E+01	--	--	--	--	--	--	--	--	--	--	3.1E-01	1.4E+01
Bis2-Chloroisopropyl Ether	0	--	--	1.4E+03	1.7E+05	--	--	1.4E+03	1.7E+05	--	--	--	--	--	--	--	--	--	--	1.4E+03	1.7E+05
Bromoform [C]	0	--	--	4.4E+01	3.6E+03	--	--	4.4E+01	3.6E+03	--	--	--	--	--	--	--	--	--	--	4.4E+01	3.6E+03
Butylbenzylphthalate	0	--	--	3.0E+03	5.2E+03	--	--	3.0E+03	5.2E+03	--	--	--	--	--	--	--	--	--	--	3.0E+03	5.2E+03
Cadmium	0	3.9E+00	1.1E+00	5.0E+00	--	3.9E+00	1.1E+00	5.0E+00	--	--	--	--	--	--	--	--	--	3.9E+00	1.1E+00	5.0E+00	--
Carbon Tetrachloride [C]	0	--	--	2.5E+00	4.4E+01	--	--	2.5E+00	4.4E+01	--	--	--	--	--	--	--	--	--	--	2.5E+00	4.4E+01
Chlordane [C]	0	2.4E+00	4.3E-03	2.1E-02	2.2E-02	2.4E+00	4.3E-03	2.1E-02	2.2E-02	--	--	--	--	--	--	--	--	2.4E+00	4.3E-03	2.1E-02	2.2E-02
Chloride	0	8.6E+05	2.3E+05	2.5E+05	--	8.6E+05	2.3E+05	2.5E+05	--	--	--	--	--	--	--	--	--	8.6E+05	2.3E+05	2.5E+05	--
TRC	0	1.9E+01	1.1E+01	--	--	1.9E+01	1.1E+01	--	--	--	--	--	--	--	--	--	--	1.9E+01	1.1E+01	--	--
Chlorobenzene	0	--	--	6.8E+02	2.1E+04	--	--	6.8E+02	2.1E+04	--	--	--	--	--	--	--	--	--	--	6.8E+02	2.1E+04

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane[C]	0	--	--	4.1E+00	3.4E+02	--	--	4.1E+00	3.4E+02	--	--	--	--	--	--	--	--	--	--	4.1E+00	3.4E+02
Chloroform [C]	0	--	--	3.5E+02	2.9E+04	--	--	3.5E+02	2.9E+04	--	--	--	--	--	--	--	--	--	--	3.5E+02	2.9E+04
2-Chloronaphthalene	0	--	--	1.7E+03	4.3E+03	--	--	1.7E+03	4.3E+03	--	--	--	--	--	--	--	--	--	--	1.7E+03	4.3E+03
2-Chlorophenol	0	--	--	1.2E+02	4.0E+02	--	--	1.2E+02	4.0E+02	--	--	--	--	--	--	--	--	--	--	1.2E+02	4.0E+02
Chlorpyrifos	0	8.3E-02	4.1E-02	--	--	8.3E-02	4.1E-02	--	--	--	--	--	--	--	--	--	--	8.3E-02	4.1E-02	--	--
Chromium III	0	5.7E+02	7.4E+01	--	--	5.7E+02	7.4E+01	--	--	--	--	--	--	--	--	--	--	5.7E+02	7.4E+01	--	--
Chromium VI	0	1.6E+01	1.1E+01	--	--	1.6E+01	1.1E+01	--	--	--	--	--	--	--	--	--	--	1.6E+01	1.1E+01	--	--
Chromium, Total	0	--	--	1.0E+02	--	--	--	1.0E+02	--	--	--	--	--	--	--	--	--	--	--	1.0E+02	--
Chrysene [C]	0	--	--	4.4E-02	4.9E-01	--	--	4.4E-02	4.9E-01	--	--	--	--	--	--	--	--	--	--	4.4E-02	4.9E-01
Copper	0	1.3E+01	9.0E+00	1.3E+03	--	1.3E+01	9.0E+00	1.3E+03	--	--	--	--	--	--	--	--	--	1.3E+01	9.0E+00	1.3E+03	--
Cyanide	0	2.2E+01	5.2E+00	7.0E+02	2.2E+05	2.2E+01	5.2E+00	7.0E+02	2.2E+05	--	--	--	--	--	--	--	--	2.2E+01	5.2E+00	7.0E+02	2.2E+05
DDD [C]	0	--	--	8.3E-03	8.4E-03	--	--	8.3E-03	8.4E-03	--	--	--	--	--	--	--	--	--	--	8.3E-03	8.4E-03
DDE [C]	0	--	--	5.9E-03	5.9E-03	--	--	5.9E-03	5.9E-03	--	--	--	--	--	--	--	--	--	--	5.9E-03	5.9E-03
DDT [C]	0	1.1E+00	1.0E-03	5.9E-03	5.9E-03	1.1E+00	1.0E-03	5.9E-03	5.9E-03	--	--	--	--	--	--	--	--	1.1E+00	1.0E-03	5.9E-03	5.9E-03
Demeton	0	--	1.0E-01	--	--	--	1.0E-01	--	--	--	--	--	--	--	--	--	--	--	1.0E-01	--	--
Dibenz(a,h)anthracene [C]	0	--	--	4.4E-02	4.9E-01	--	--	4.4E-02	4.9E-01	--	--	--	--	--	--	--	--	--	--	4.4E-02	4.9E-01
Dibutyl phthalate	0	--	--	2.7E+03	1.2E+04	--	--	2.7E+03	1.2E+04	--	--	--	--	--	--	--	--	--	--	2.7E+03	1.2E+04
Dichloromethane (Methylene Chloride) [C]	0	--	--	4.7E+01	1.6E+04	--	--	4.7E+01	1.6E+04	--	--	--	--	--	--	--	--	--	--	4.7E+01	1.6E+04
1,2-Dichlorobenzene	0	--	--	2.7E+03	1.7E+04	--	--	2.7E+03	1.7E+04	--	--	--	--	--	--	--	--	--	--	2.7E+03	1.7E+04
1,3-Dichlorobenzene	0	--	--	4.0E+02	2.6E+03	--	--	4.0E+02	2.6E+03	--	--	--	--	--	--	--	--	--	--	4.0E+02	2.6E+03
1,4-Dichlorobenzene	0	--	--	4.0E+02	2.6E+03	--	--	4.0E+02	2.6E+03	--	--	--	--	--	--	--	--	--	--	4.0E+02	2.6E+03
3,3-Dichlorobenzidine[C]	0	--	--	4.0E-01	7.7E-01	--	--	4.0E-01	7.7E-01	--	--	--	--	--	--	--	--	--	--	4.0E-01	7.7E-01
Dichlorobromomethane [C]	0	--	--	5.6E+00	4.6E+02	--	--	5.6E+00	4.6E+02	--	--	--	--	--	--	--	--	--	--	5.6E+00	4.6E+02
1,2-Dichloroethane [C]	0	--	--	3.8E+00	9.9E+02	--	--	3.8E+00	9.9E+02	--	--	--	--	--	--	--	--	--	--	3.8E+00	9.9E+02
1,1-Dichloroethylene	0	--	--	3.1E+02	1.7E+04	--	--	3.1E+02	1.7E+04	--	--	--	--	--	--	--	--	--	--	3.1E+02	1.7E+04
1,2-trans-dichloroethylene	0	--	--	7.0E+02	1.4E+05	--	--	7.0E+02	1.4E+05	--	--	--	--	--	--	--	--	--	--	7.0E+02	1.4E+05
2,4-Dichlorophenol	0	--	--	9.3E+01	7.9E+02	--	--	9.3E+01	7.9E+02	--	--	--	--	--	--	--	--	--	--	9.3E+01	7.9E+02
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	1.0E+02	--	--	--	1.0E+02	--	--	--	--	--	--	--	--	--	--	--	1.0E+02	--
1,2-Dichloropropane[C]	0	--	--	5.2E+00	3.9E+02	--	--	5.2E+00	3.9E+02	--	--	--	--	--	--	--	--	--	--	5.2E+00	3.9E+02
1,3-Dichloropropene	0	--	--	1.0E+01	1.7E+03	--	--	1.0E+01	1.7E+03	--	--	--	--	--	--	--	--	--	--	1.0E+01	1.7E+03
Dieldrin [C]	0	2.4E-01	5.6E-02	1.4E-03	1.4E-03	2.4E-01	5.6E-02	1.4E-03	1.4E-03	--	--	--	--	--	--	--	--	2.4E-01	5.6E-02	1.4E-03	1.4E-03
Diethyl Phthalate	0	--	--	2.3E+04	1.2E+05	--	--	2.3E+04	1.2E+05	--	--	--	--	--	--	--	--	--	--	2.3E+04	1.2E+05
Di-2-Ethylhexyl Phthalate [C]	0	--	--	1.8E+01	5.9E+01	--	--	1.8E+01	5.9E+01	--	--	--	--	--	--	--	--	--	--	1.8E+01	5.9E+01
2,4-Dimethylphenol	0	--	--	5.4E+02	2.3E+03	--	--	5.4E+02	2.3E+03	--	--	--	--	--	--	--	--	--	--	5.4E+02	2.3E+03
Dimethyl Phthalate	0	--	--	3.1E+05	2.9E+06	--	--	3.1E+05	2.9E+06	--	--	--	--	--	--	--	--	--	--	3.1E+05	2.9E+06
Di-n-Butyl Phthalate	0	--	--	2.7E+03	1.2E+04	--	--	2.7E+03	1.2E+04	--	--	--	--	--	--	--	--	--	--	2.7E+03	1.2E+04
2,4 Dinitrophenol	0	--	--	7.0E+01	1.4E+04	--	--	7.0E+01	1.4E+04	--	--	--	--	--	--	--	--	--	--	7.0E+01	1.4E+04
2-Methyl-4,6-Dinitrophenol	0	--	--	1.3E+01	7.65E+02	--	--	1.3E+01	7.7E+02	--	--	--	--	--	--	--	--	--	--	1.3E+01	7.7E+02
2,4-Dinitrotoluene [C]	0	--	--	1.1E+00	9.1E+01	--	--	1.1E+00	9.1E+01	--	--	--	--	--	--	--	--	--	--	1.1E+00	9.1E+01
Dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin) (ppq)	0	--	--	1.2E-06	1.2E-06	--	--	1.2E-06	1.2E-06	--	--	--	--	--	--	--	--	--	--	1.2E-06	1.2E-06
1,2-Diphenylhydrazine[C]	0	--	--	4.0E-01	5.4E+00	--	--	4.0E-01	5.4E+00	--	--	--	--	--	--	--	--	--	--	4.0E-01	5.4E+00
Alpha-Endosulfan	0	2.2E-01	5.6E-02	1.1E+02	2.4E+02	2.2E-01	5.6E-02	1.1E+02	2.4E+02	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	1.1E+02	2.4E+02
Beta-Endosulfan	0	2.2E-01	5.6E-02	1.1E+02	2.4E+02	2.2E-01	5.6E-02	1.1E+02	2.4E+02	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	1.1E+02	2.4E+02
Endosulfan Sulfate	0	--	--	1.1E+02	2.4E+02	--	--	1.1E+02	2.4E+02	--	--	--	--	--	--	--	--	--	--	1.1E+02	2.4E+02
Endrin	0	8.6E-02	3.6E-02	7.6E-01	8.1E-01	8.6E-02	3.6E-02	7.6E-01	8.1E-01	--	--	--	--	--	--	--	--	8.6E-02	3.6E-02	7.6E-01	8.1E-01
Endrin Aldehyde	0	--	--	7.6E-01	8.1E-01	--	--	7.6E-01	8.1E-01	--	--	--	--	--	--	--	--	--	--	7.6E-01	8.1E-01

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	3.1E+03	2.9E+04	--	--	3.1E+03	2.9E+04	--	--	--	--	--	--	--	--	--	--	3.1E+03	2.9E+04
Fluoranthene	0	--	--	3.0E+02	3.7E+02	--	--	3.0E+02	3.7E+02	--	--	--	--	--	--	--	--	--	--	3.0E+02	3.7E+02
Fluorene	0	--	--	1.3E+03	1.4E+04	--	--	1.3E+03	1.4E+04	--	--	--	--	--	--	--	--	--	--	1.3E+03	1.4E+04
Foaming Agents	0	--	--	5.0E+02	--	--	--	5.0E+02	--	--	--	--	--	--	--	--	--	--	--	5.0E+02	--
Guthion	0	--	1.0E-02	--	--	--	1.0E-02	--	--	--	--	--	--	--	--	--	--	--	1.0E-02	--	--
Heptachlor [C]	0	5.2E-01	3.8E-03	2.1E-03	2.1E-03	5.2E-01	3.8E-03	2.1E-03	2.1E-03	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	2.1E-03	2.1E-03
Heptachlor Epoxide [C]	0	5.2E-01	3.8E-03	1.0E-03	1.1E-03	5.2E-01	3.8E-03	1.0E-03	1.1E-03	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	1.0E-03	1.1E-03
Hexachlorobenzene [C]	0	--	--	7.5E-03	7.7E-03	--	--	7.5E-03	7.7E-03	--	--	--	--	--	--	--	--	--	--	7.5E-03	7.7E-03
Hexachlorobutadiene [C]	0	--	--	4.4E+00	5.0E+02	--	--	4.4E+00	5.0E+02	--	--	--	--	--	--	--	--	--	--	4.4E+00	5.0E+02
Hexachlorocyclohexane Alpha-BHC [C]	0	--	--	3.9E-02	1.3E-01	--	--	3.9E-02	1.3E-01	--	--	--	--	--	--	--	--	--	--	3.9E-02	1.3E-01
Hexachlorocyclohexane Beta-BHC [C]	0	--	--	1.4E-01	4.6E-01	--	--	1.4E-01	4.6E-01	--	--	--	--	--	--	--	--	--	--	1.4E-01	4.6E-01
Hexachlorocyclohexane Gamma-BHC [C] (Lindane)	0	9.5E-01	--	1.9E-01	6.3E-01	9.5E-01	--	1.9E-01	6.3E-01	--	--	--	--	--	--	--	--	9.5E-01	--	1.9E-01	6.3E-01
Hexachlorocyclopentadiene	0	--	--	2.4E+02	1.7E+04	--	--	2.4E+02	1.7E+04	--	--	--	--	--	--	--	--	--	--	2.4E+02	1.7E+04
Hexachloroethane [C]	0	--	--	1.9E+01	8.9E+01	--	--	1.9E+01	8.9E+01	--	--	--	--	--	--	--	--	--	--	1.9E+01	8.9E+01
Hydrogen Sulfide	0	--	2.0E+00	--	--	--	2.0E+00	--	--	--	--	--	--	--	--	--	--	--	2.0E+00	--	--
Indeno (1,2,3-cd) pyrene [C]	0	--	--	4.4E-02	4.9E-01	--	--	4.4E-02	4.9E-01	--	--	--	--	--	--	--	--	--	--	4.4E-02	4.9E-01
Iron	0	--	--	3.0E+02	--	--	--	3.0E+02	--	--	--	--	--	--	--	--	--	--	--	3.0E+02	--
Isophorone [C]	0	--	--	3.6E+02	2.6E+04	--	--	3.6E+02	2.6E+04	--	--	--	--	--	--	--	--	--	--	3.6E+02	2.6E+04
Kepone	0	--	0.0E+00	--	--	--	0.0E+00	--	--	--	--	--	--	--	--	--	--	--	0.0E+00	--	--
Lead	0	1.2E+02	1.4E+01	1.5E+01	--	1.2E+02	1.4E+01	1.5E+01	--	--	--	--	--	--	--	--	--	1.2E+02	1.4E+01	1.5E+01	--
Malathion	0	--	1.0E-01	--	--	--	1.0E-01	--	--	--	--	--	--	--	--	--	--	--	1.0E-01	--	--
Manganese	0	--	--	5.0E+01	--	--	--	5.0E+01	--	--	--	--	--	--	--	--	--	--	--	5.0E+01	--
Mercury	0	1.4E+00	7.7E-01	5.0E-02	5.1E-02	1.4E+00	7.7E-01	5.0E-02	5.1E-02	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	5.0E-02	5.1E-02
Methyl Bromide	0	--	--	4.8E+01	4.0E+03	--	--	4.8E+01	4.0E+03	--	--	--	--	--	--	--	--	--	--	4.8E+01	4.0E+03
Methoxychlor	0	--	3.0E-02	1.0E+02	--	--	3.0E-02	1.0E+02	--	--	--	--	--	--	--	--	--	--	3.0E-02	1.0E+02	--
Mirex	0	--	0.0E+00	--	--	--	0.0E+00	--	--	--	--	--	--	--	--	--	--	--	0.0E+00	--	--
Monochlorobenzene	0	--	--	6.8E+02	2.1E+04	--	--	6.8E+02	2.1E+04	--	--	--	--	--	--	--	--	--	--	6.8E+02	2.1E+04
Nickel	0	1.8E+02	2.0E+01	6.1E+02	4.6E+03	1.8E+02	2.0E+01	6.1E+02	4.6E+03	--	--	--	--	--	--	--	--	1.8E+02	2.0E+01	6.1E+02	4.6E+03
Nitrate (as N)	0	--	--	1.0E+04	--	--	--	1.0E+04	--	--	--	--	--	--	--	--	--	--	--	1.0E+04	--
Nitrobenzene	0	--	--	1.7E+01	1.9E+03	--	--	1.7E+01	1.9E+03	--	--	--	--	--	--	--	--	--	--	1.7E+01	1.9E+03
N-Nitrosodimethylamine [C]	0	--	--	6.9E-03	8.1E+01	--	--	6.9E-03	8.1E+01	--	--	--	--	--	--	--	--	--	--	6.9E-03	8.1E+01
N-Nitrosodiphenylamine [C]	0	--	--	5.0E+01	1.6E+02	--	--	5.0E+01	1.6E+02	--	--	--	--	--	--	--	--	--	--	5.0E+01	1.6E+02
N-Nitrosodi-n-propylamine [C]	0	--	--	5.0E-02	1.4E+01	--	--	5.0E-02	1.4E+01	--	--	--	--	--	--	--	--	--	--	5.0E-02	1.4E+01
Parathion	0	6.5E-02	1.3E-02	--	--	6.5E-02	1.3E-02	--	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	--	--
PCB-1016	0	--	1.4E-02	--	--	--	1.4E-02	--	--	--	--	--	--	--	--	--	--	--	1.4E-02	--	--
PCB-1221	0	--	1.4E-02	--	--	--	1.4E-02	--	--	--	--	--	--	--	--	--	--	--	1.4E-02	--	--
PCB-1232	0	--	1.4E-02	--	--	--	1.4E-02	--	--	--	--	--	--	--	--	--	--	--	1.4E-02	--	--
PCB-1242	0	--	1.4E-02	--	--	--	1.4E-02	--	--	--	--	--	--	--	--	--	--	--	1.4E-02	--	--
PCB-1248	0	--	1.4E-02	--	--	--	1.4E-02	--	--	--	--	--	--	--	--	--	--	--	1.4E-02	--	--
PCB-1254	0	--	1.4E-02	--	--	--	1.4E-02	--	--	--	--	--	--	--	--	--	--	--	1.4E-02	--	--
PCB-1260	0	--	1.4E-02	--	--	--	1.4E-02	--	--	--	--	--	--	--	--	--	--	--	1.4E-02	--	--
PCB Total [C]	0	--	--	1.7E-03	1.7E-03	--	--	1.7E-03	1.7E-03	--	--	--	--	--	--	--	--	--	--	1.7E-03	1.7E-03

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Pentachlorophenol [C]	0	7.1E+00	5.5E+00	2.8E+00	8.2E+01	7.1E+00	5.5E+00	2.8E+00	8.2E+01	--	--	--	--	--	--	--	--	7.1E+00	5.5E+00	2.8E+00	8.2E+01
Phenol	0	--	--	2.1E+04	4.6E+06	--	--	2.1E+04	4.6E+06	--	--	--	--	--	--	--	--	--	--	2.1E+04	4.6E+06
Pyrene	0	--	--	9.6E+02	1.1E+04	--	--	9.6E+02	1.1E+04	--	--	--	--	--	--	--	--	--	--	9.6E+02	1.1E+04
Radionuclides (pCi/l except Beta/Photon)	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Gross Alpha Activity	0	--	--	1.5E+01	1.5E+01	--	--	1.5E+01	1.5E+01	--	--	--	--	--	--	--	--	--	--	1.5E+01	1.5E+01
Beta and Photon Activity (mrem/yr)	0	--	--	4.0E+00	4.0E+00	--	--	4.0E+00	4.0E+00	--	--	--	--	--	--	--	--	--	--	4.0E+00	4.0E+00
Strontium-90	0	--	--	8.0E+00	8.0E+00	--	--	8.0E+00	8.0E+00	--	--	--	--	--	--	--	--	--	--	8.0E+00	8.0E+00
Tritium	0	--	--	2.0E+04	2.0E+04	--	--	2.0E+04	2.0E+04	--	--	--	--	--	--	--	--	--	--	2.0E+04	2.0E+04
Selenium	0	2.0E+01	5.0E+00	1.7E+02	1.1E+04	2.0E+01	5.0E+00	1.7E+02	1.1E+04	--	--	--	--	--	--	--	--	2.0E+01	5.0E+00	1.7E+02	1.1E+04
Silver	0	3.4E+00	--	--	--	3.4E+00	--	--	--	--	--	--	--	--	--	--	--	3.4E+00	--	--	--
Sulfate	0	--	--	2.5E+05	--	--	--	2.5E+05	--	--	--	--	--	--	--	--	--	--	--	2.5E+05	--
1,1,2,2-Tetrachloroethane [C]	0	--	--	1.7E+00	1.1E+02	--	--	1.7E+00	1.1E+02	--	--	--	--	--	--	--	--	--	--	1.7E+00	1.1E+02
Tetrachloroethylene [C]	0	--	--	8.0E+00	8.9E+01	--	--	8.0E+00	8.9E+01	--	--	--	--	--	--	--	--	--	--	8.0E+00	8.9E+01
Thallium	0	--	--	1.7E+00	6.3E+00	--	--	1.7E+00	6.3E+00	--	--	--	--	--	--	--	--	--	--	1.7E+00	6.3E+00
Toluene	0	--	--	6.8E+03	2.0E+05	--	--	6.8E+03	2.0E+05	--	--	--	--	--	--	--	--	--	--	6.8E+03	2.0E+05
Total dissolved solids	0	--	--	5.0E+05	--	--	--	5.0E+05	--	--	--	--	--	--	--	--	--	--	--	5.0E+05	--
Toxaphene [C]	0	7.3E-01	2.0E-04	7.3E-03	7.5E-03	7.3E-01	2.0E-04	7.3E-03	7.5E-03	--	--	--	--	--	--	--	--	7.3E-01	2.0E-04	7.3E-03	7.5E-03
Tributyltin	0	4.6E-01	6.3E-02	--	--	4.6E-01	6.3E-02	--	--	--	--	--	--	--	--	--	--	4.6E-01	6.3E-02	--	--
1,2,4-Trichlorobenzene	0	--	--	2.6E+02	9.4E+02	--	--	2.6E+02	9.4E+02	--	--	--	--	--	--	--	--	--	--	2.6E+02	9.4E+02
1,1,2-Trichloroethane [C]	0	--	--	6.0E+00	4.2E+02	--	--	6.0E+00	4.2E+02	--	--	--	--	--	--	--	--	--	--	6.0E+00	4.2E+02
Trichloroethylene [C]	0	--	--	2.7E+01	8.1E+02	--	--	2.7E+01	8.1E+02	--	--	--	--	--	--	--	--	--	--	2.7E+01	8.1E+02
2,4,6-Trichlorophenol [C]	0	--	--	2.1E+01	6.5E+01	--	--	2.1E+01	6.5E+01	--	--	--	--	--	--	--	--	--	--	2.1E+01	6.5E+01
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	5.0E+01	--	--	--	5.0E+01	--	--	--	--	--	--	--	--	--	--	--	5.0E+01	--
Vinyl Chloride [C]	0	--	--	2.3E-01	6.1E+01	--	--	2.3E-01	6.1E+01	--	--	--	--	--	--	--	--	--	--	2.3E-01	6.1E+01
Zinc	0	1.2E+02	1.2E+02	9.1E+03	6.9E+04	1.2E+02	1.2E+02	9.1E+03	6.9E+04	--	--	--	--	--	--	--	--	1.2E+02	1.2E+02	9.1E+03	6.9E+04

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
   Antidegradation WLAs are based upon a complete mix.
6. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
   = (0.1(WQC - background conc.) + background conc.) for human health
7. WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, Harmonic Mean for Carcinogens, and Annual Average for Dioxin. Mixing ratios may be substituted for stream flows where appropriate

Metal	Target Value (SSTV)
Antimony	1.4E+01
Arsenic	1.0E+01
Barium	2.0E+03
Cadmium	6.8E-01
Chromium III	4.4E+01
Chromium VI	6.4E+00
Copper	5.4E+00
Iron	3.0E+02
Lead	8.1E+00
Manganese	5.0E+01
Mercury	5.0E-02
Nickel	1.2E+01
Selenium	3.0E+00
Silver	1.4E+00
Zinc	4.7E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

5/2/2011 11:29:11 AM

Facility = Meadville E.S. - VA0022721
Chemical = Ammonia
Chronic averaging period = 30
WLAa = 23
WLAc =
Q.L. = 0.2
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 9
Variance = 29.16
C.V. = 0.6
97th percentile daily values = 21.9007
97th percentile 4 day average = 14.9741
97th percentile 30 day average= 10.8544
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

No Limit is required for this material

The data are:

9

6/8/2011 4:55:35 PM

Facility = Meadville E.S. - VA0022721
Chemical = TRC
Chronic averaging period = 4
WLAa = 19
WLAc =
Q.L. = 100
# samples/mo. = 20
# samples/wk. = 5

Summary of Statistics:

observations = 1
Expected Value = 20000
Variance = 1440000
C.V. = 0.6
97th percentile daily values = 48668.3
97th percentile 4 day average = 33275.8
97th percentile 30 day average= 24121.0
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 19
Average Weekly limit = 12.3834080752271
Average Monthly LImit = 9.77838359349855

The data are:

20000

Attachment G

Historical Limit Development

FRESHWATER
WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Meadville Elementary School Permit No.: VA0022721

Receiving Stream: Sandy Creek

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information

Mean Hardness (as CaCO3) =	27.5 mg/L
90% Temperature (Annual) =	23.1 deg C
90% Temperature (Wet season) =	23.9 deg C
90% Maximum pH =	7.2 SU
10% Maximum pH =	6.5 SU
Tier Designation (1 or 2) =	1
Public Water Supply (PWS) Y/N? =	y
Trout Present Y/N? =	n
Early Life Stages Present Y/N? =	y

Stream Flows

1Q10 (Annual) =	0 MGD
7Q10 (Annual) =	0 MGD
30Q10 (Annual) =	0 MGD
1Q10 (Wet season) =	0 MGD
30Q10 (Wet season)	0 MGD
30Q5 =	0 MGD
Harmonic Mean =	0 MGD
Annual Average =	N/A MGD

Mixing Information

Annual - 1Q10 Mix =	100 %
- 7Q10 Mix =	100 %
- 30Q10 Mix =	100 %
Wet Season - 1Q10 Mix =	100 %
- 30Q10 Mix =	100 %

Effluent Information

Mean Hardness (as CaCO3) =	50 mg/L
90% Temp (Annual) =	26 deg C
90% Temp (Wet season) =	deg C
90% Maximum pH =	7.8 SU
10% Maximum pH =	SU
Discharge Flow =	0.0051 MGD

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Acenapthene	0	--	--	1.2E+03	2.7E+03	--	--	1.2E+03	2.7E+03	--	--	--	--	--	--	--	--	--	--	1.2E+03	2.7E+03
Acrolein	0	--	--	3.2E+02	7.8E+02	--	--	3.2E+02	7.8E+02	--	--	--	--	--	--	--	--	--	--	3.2E+02	7.8E+02
Acrylonitrile [C]	0	--	--	5.9E-01	6.6E+00	--	--	5.9E-01	6.6E+00	--	--	--	--	--	--	--	--	--	--	5.9E-01	6.6E+00
Aldrin [C]	0	3.0E+00	--	1.3E-03	1.4E-03	3.0E+00	--	1.3E-03	1.4E-03	--	--	--	--	--	--	--	--	3.0E+00	--	1.3E-03	1.4E-03
Ammonia-N (mg/l) (Yearly)	0	1.21E+01	1.52E+00	--	--	1.2E+01	1.5E+00	--	--	--	--	--	--	--	--	--	--	1.2E+01	1.5E+00	--	--
Ammonia-N (mg/l) (High Flow)	0	1.21E+01	3.18E+00	--	--	1.2E+01	3.2E+00	--	--	--	--	--	--	--	--	--	--	1.2E+01	3.2E+00	--	--
Anthracene	0	--	--	9.6E+03	1.1E+05	--	--	9.6E+03	1.1E+05	--	--	--	--	--	--	--	--	--	--	9.6E+03	1.1E+05
Antimony	0	--	--	1.4E+01	4.3E+03	--	--	1.4E+01	4.3E+03	--	--	--	--	--	--	--	--	--	--	1.4E+01	4.3E+03
Arsenic	0	3.4E+02	1.5E+02	1.0E+01	--	3.4E+02	1.5E+02	1.0E+01	--	--	--	--	--	--	--	--	--	3.4E+02	1.5E+02	1.0E+01	--
Barium	0	--	--	2.0E+03	--	--	--	2.0E+03	--	--	--	--	--	--	--	--	--	--	--	2.0E+03	--
Benzene [C]	0	--	--	1.2E+01	7.1E+02	--	--	1.2E+01	7.1E+02	--	--	--	--	--	--	--	--	--	--	1.2E+01	7.1E+02
Benzidine [C]	0	--	--	1.2E-03	5.4E-03	--	--	1.2E-03	5.4E-03	--	--	--	--	--	--	--	--	--	--	1.2E-03	5.4E-03
Benzo (a) anthracene [C]	0	--	--	4.4E-02	4.9E-01	--	--	4.4E-02	4.9E-01	--	--	--	--	--	--	--	--	--	--	4.4E-02	4.9E-01
Benzo (b) fluoranthene [C]	0	--	--	4.4E-02	4.9E-01	--	--	4.4E-02	4.9E-01	--	--	--	--	--	--	--	--	--	--	4.4E-02	4.9E-01
Benzo (k) fluoranthene [C]	0	--	--	4.4E-02	4.9E-01	--	--	4.4E-02	4.9E-01	--	--	--	--	--	--	--	--	--	--	4.4E-02	4.9E-01
Benzo (a) pyrene [C]	0	--	--	4.4E-02	4.9E-01	--	--	4.4E-02	4.9E-01	--	--	--	--	--	--	--	--	--	--	4.4E-02	4.9E-01
Bis2-Chloroethyl Ether	0	--	--	3.1E-01	1.4E+01	--	--	3.1E-01	1.4E+01	--	--	--	--	--	--	--	--	--	--	3.1E-01	1.4E+01
Bis2-Chloroisopropyl Ether	0	--	--	1.4E+03	1.7E+05	--	--	1.4E+03	1.7E+05	--	--	--	--	--	--	--	--	--	--	1.4E+03	1.7E+05
Bromoform [C]	0	--	--	4.4E+01	3.6E+03	--	--	4.4E+01	3.6E+03	--	--	--	--	--	--	--	--	--	--	4.4E+01	3.6E+03
Butylbenzylphthalate	0	--	--	3.0E+03	5.2E+03	--	--	3.0E+03	5.2E+03	--	--	--	--	--	--	--	--	--	--	3.0E+03	5.2E+03
Cadmium	0	1.8E+00	6.6E-01	5.0E+00	--	1.8E+00	6.6E-01	5.0E+00	--	--	--	--	--	--	--	--	--	1.8E+00	6.6E-01	5.0E+00	--
Carbon Tetrachloride [C]	0	--	--	2.5E+00	4.4E+01	--	--	2.5E+00	4.4E+01	--	--	--	--	--	--	--	--	--	--	2.5E+00	4.4E+01
Chlordane [C]	0	2.4E+00	4.3E-03	2.1E-02	2.2E-02	2.4E+00	4.3E-03	2.1E-02	2.2E-02	--	--	--	--	--	--	--	--	2.4E+00	4.3E-03	2.1E-02	2.2E-02
Chloride	0	8.6E+05	2.3E+05	2.5E+05	--	8.6E+05	2.3E+05	2.5E+05	--	--	--	--	--	--	--	--	--	8.6E+05	2.3E+05	2.5E+05	--
TRC	0	1.9E+01	1.1E+01	--	--	1.9E+01	1.1E+01	--	--	--	--	--	--	--	--	--	--	1.9E+01	1.1E+01	--	--
Chlorobenzene	0	--	--	6.8E+02	2.1E+04	--	--	6.8E+02	2.1E+04	--	--	--	--	--	--	--	--	--	--	6.8E+02	2.1E+04

6/10/2011 11:00:51 AM

Facility = Meadville E.S. - VA0022721
Chemical = Ammonia
Chronic averaging period = 30
WLAa = 12
WLAc =
Q.L. = .2
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 9
Variance = 29.16
C.V. = 0.6
97th percentile daily values = 21.9007
97th percentile 4 day average = 14.9741
97th percentile 30 day average= 10.8544
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 12
Average Weekly limit = 12
Average Monthly LImit = 12

The data are:

9

Attachment H

Ground Water Monitoring

THE GROUND WATER MONITORING RATIONALE IS BASED ON THE FOLLOWING:

The facility utilizes an unlined wastewater stabilization pond as its primary treatment system. On that basis, there is a requirement to perform ground water monitoring to insure continued system integrity. The facility maintains three ground water monitoring wells. Well number one is the up-gradient well and well numbers 2 and 3 are the down-gradient wells. For this reissuance, a review of the submitted data showed elevated levels of chlorides, specific conductance, and nitrates in the down-gradient wells. In addition, the lagoon is fairly remote. Based upon the elevated downgradient concentrations, the monitoring frequency was increased from semi-annual to quarterly to ensure that adequate data is available for evaluation. Based on the previously submitted data it appears that the lagoon may be leaking, with multiple samples of nitrates above the ground water standards. A permit condition is added that requires the permittee to submit a statistical evaluation report to DEQ to determine the status of the integrity of the lagoon. If it is determined that the lagoon is leaking then a corrective action plan is to be submitted to DEQ that details specific actions to be performed.

Ground Water

Elevation – This is taken at the time of well sampling and helps to verify ground water flow direction. The monitoring frequency is measured once per three months. This sample type and monitoring frequency are in accordance with guidance.

Specific

Conductance – This is a monitoring requirement with no limits. This test provides an indication of dissolved solids which are mobile in the ground water and is a common indicator of the wastewater. The monitoring frequency is once per three months by grab sample. This monitoring frequency and sample type are in accordance with guidance and should be appropriate for assessment of ground water quality and facility operations.

pH - This is a monitoring requirement with no limits. The monitoring frequency is once per three months by grab sample. This monitoring frequency and sample type are in accordance with guidance and should be appropriate for assessment of ground water quality and facility operations.

Ammonia, Nitrate

Chloride - This is a monitoring requirement with no limits. These parameters are mobile in the ground water and are a common indicator of the wastewater. The monitoring frequency for each parameter is once per three months by grab sample. This monitoring frequency and sample type are in accordance with guidance and should be appropriate for assessment of ground water quality and facility operations.

TOC- This is a monitoring requirement with no limits. This parameter is used, in part, to verify well integrity. The monitoring frequency is once per three months by grab sample. This monitoring frequency and sample type are in accordance with guidance and should be appropriate for assessment of ground water quality and well integrity.

Temperature - This is a monitoring requirement with no limits. It is one of the parameters utilized in well purging for verification of stabilization. The monitoring frequency is once per three months by grab sample. This monitoring frequency and sample type are in accordance with guidance.

GROUNDWATER MONITORING DATA
MEADVILLE ELEMENTARY SCHOOL - VA0022721

Parameter	Units	MW1	MW2	MW3	MW1	MW2	MW3	MW1	MW2	MW3	MW1	MW2	MW3
Date		Sep 09	Sep 09	Sep 09	Mar 10	Mar 10	Mar 10	Sep 10	Sep 10	Sep 10	Mar 11	Mar 11	Mar 11
Specific Conductance	umhos/cm	301	267	222	135	234	197	491	217	848	407	268	204
pH	s.u.	5.58	5.67	5.61	6	5.76	5.88	5.41	5.76	5.64	5.39	5.67	5.62
Ammonia - Nitrogen	mg/l	0	0	0	0	0	0.28	0	0	0	0	0	0
Nitrate - Nitrogen	mg/l	0.41	9.2	7.6	0.62	4.7	4.4	1.7	4.7	3.7	1.9	11	7.2
Total Organic Carbon	mg/l	0	4.4	30	12.5	18.9	17.6	2.3	13.9	12.6	14.3	17.2	21.2
Chloride	mg/l	0	30.9	27.6	0	30.1	26.4	0	24.6	23.1	0	31.2	24.7
Temperature	deg C	18.2	16	16.1	12.7	12.4	12	22.1	17.5	18	12.2	13.1	11.8
Dissolved Oxygen	%	119.6	90	106	135.6	95.6	79.7	84.5	42.3	17.1	70	33.1	12.4
Fecal Coliform	n/100 mL												
Total Phosphorus	mg/L												

Parameter	Units	MW1	MW2	MW3	MW1	MW2	MW3	MW1	MW2	MW3
Date		Apr 08	Apr 08	Apr 08	Sep 06	Sep 06	Sep 06	Feb 09	Feb 09	Feb 09
Specific Conductance	umhos/cm	56.4	312	226				195	234	196
pH	s.u.	5.54	6.29	5.57				5.56	5.43	5.72
Ammonia - Nitrogen	mg/l	0	0	0	0	0	0	0	0	0
Nitrate - Nitrogen	mg/l	0.7	8.59	7.64	1.43	3.38	5.3	0.36	8.4	7.3
Total Organic Carbon	mg/l	0	1.23	1.29	0	0	0	4.5	16.6	24.6
Chloride	mg/l	2.77	34.3	23.4	1.43	29.5	15.2	0	31.5	26.5
Temperature	deg C	14.6	13.2	12.7				16.1	15.3	15.4
Dissolved Oxygen	%							123.5	65.8	65.7
Fecal Coliform	n/100 mL				0	0	0			
Total Phosphorus	mg/L				0.079	0.107	0.104			